Ontario

Ontario Geological Survey
Open File Report 6194

Upper Manitou Lake Area High–Density Regional Lake Sediment and Water Geochemical Survey, Northwestern Ontario

2006

2007-00357

Ontario

ONTARIO GEOLOGICAL SURVEY

Open File Report 6194

Upper Manitou Lake Area High–Density Regional Lake Sediment and Water Geochemical Survey, Northwestern Ontario

by

V.E. Felix

2006

Parts of this publication may be quoted if credit is given. It is recommended that reference to this publication be made in the following form:

Felix, V.E. 2006. Upper Manitou Lake area high–density regional lake sediment and water geochemical survey, northwestern Ontario; Ontario Geological Survey, Open File Report 6194, 77p.

© Queen's Printer for Ontario, 2006

© Queen's Printer for Ontario, 2006.

Open File Reports of the Ontario Geological Survey are available for viewing at the John B. Gammon Geoscience Library in Sudbury, at the Mines and Minerals Information Centre in Toronto, and at the regional Mines and Minerals office whose district includes the area covered by the report (see below).

Copies can be purchased at Publication Sales and the office whose district includes the area covered by the report. Although a particular report may not be in stock at locations other than the Publication Sales office in Sudbury, they can generally be obtained within 3 working days. All telephone, fax, mail and e-mail orders should be directed to the Publication Sales office in Sudbury. Use of VISA or MasterCard ensures the fastest possible service. Cheques or money orders should be made payable to the *Minister of Finance*.

Mines and Minerals Information Centre (MMIC) Macdonald Block, Room M2-17 900 Bay St. Toronto, Ontario M7A 1C3	Tel:	(416) 314-3800
John B. Gammon Geoscience Library 933 Ramsey Lake Road, Level A3 Sudbury, Ontario P3E 6B5	Tel:	(705) 670-5615
Publication Sales 933 Ramsey Lake Rd., Level A3 Sudbury, Ontario P3E 6B5	Tel: Fax: E-mail:	(705) 670-5691(local) 1-888-415-9845(toll-free) (705) 670-5770 pubsales.ndm@ontario.ca

Regional Mines and Minerals Offices:

Kenora - Suite 104, 810 Robertson St., Kenora P9N 4J2

Kirkland Lake - 10 Government Rd. E., Kirkland Lake P2N 1A8

Red Lake - Box 324, Ontario Government Building, Red Lake P0V 2M0

Sault Ste. Marie - 70 Foster Dr., Ste. 200, Sault Ste. Marie P6A 6V8

Southern Ontario - P.O. Bag Service 43, 126 Old Troy Rd., Tweed K0K 3J0

Sudbury - Level A3, 933 Ramsey Lake Rd., Sudbury P3E 6B5

Thunder Bay - Suite B002, 435 James St. S., Thunder Bay P7E 6S7

Timmins - Ontario Government Complex, P.O. Bag 3060, Hwy. 101 East, South Porcupine P0N 1H0

Toronto - MMIC, Macdonald Block, Room M2-17, 900 Bay St., Toronto M7A 1C3

This report has not received a technical edit. Discrepancies may occur for which the Ontario Ministry of Northern Development and Mines does not assume any liability. Source references are included in the report and users are urged to verify critical information. Recommendations and statements of opinions expressed are those of the author or authors and are not to be construed as statements of government policy.

If you wish to reproduce any of the text, tables or illustrations in this report, please write for permission to the Team Leader, Publication Services, Ministry of Northern Development and Mines, 933 Ramsey Lake Road, Level A3, Sudbury, Ontario P3E 6B5.

Cette publication est disponible en anglais seulement.

Parts of this report may be quoted if credit is given. It is recommended that reference be made in the following form:

Felix, V.E. 2006. Upper Manitou Lake area high–density regional lake sediment and water geochemical survey, northwestern Ontario; Ontario Geological Survey, Open File Report 6194, 77p.

Contents

Abstract xi

Introduction 1

Regional Setting 2
- Bedrock Geology 2
- Physiography and Quaternary Geology 4

Methodology 4
- Sampling Methods 4
- Sample Preparation and Analytical Methods 5

Quality Control (QC) Results 6
- Methods 6
- General Assessment: Lake Sediments 7
  - Inductively Coupled Plasma Mass Spectrometry and Inductively Coupled Plasma Optical Emission Spectrometry 7
  - Instrumental Neutron Activation Analysis 7
- General Assessment: Lake Waters 10

Geochemical Data Interpretation 10

Discussion of Regional Patterns 11
- Limnological Parameter 11
- Lake Sediment Geochemistry 12

Description of Anomalous Areas 14

Summary and Conclusions 19

Acknowledgments 19

References 20

Appendix 1. Proportional Dot Maps of Loss-on-Ignition, Lake Depth, pH and Conductivity 23

Appendix 2. Proportional Dot Maps of Lake Sediment Geochemistry for Ag, As, Au, Be, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Li, Mn, Mo, Ni, Pb, REEs, Sb, Ta, Th, U, V, W, Zn and Zr 29

Appendix 3. Lake Sediment Analytical Data for LOI, Ag, As, Au (INAA), Co, Cr, Cu, Fe, Mo, Ni, Pb, REEs, Sb, U, V, W and Zn 57

Metric Conversion Table 77

FIGURES

1. Location map of the Upper Manitou Lake survey area 1
2. Generalized bedrock geology of the Upper Manitou Lake area 3
3. Generalized Quaternary geology of the Upper Manitou Lake area 5
4. Location of selected geochemically anomalous lake sediment areas 13
5. Approximate land tenure showing geochemically anomalous areas described in text 15
6. Sample site location map of the Upper Manitou Lake survey area ..... backpocket

TABLES

1. Upper Manitou Lake area lake sediment data set, summary of elements analyzed by ICP and INAA and quality control data, including estimates of precision 8
2. Upper Manitou Lake area lake water data set, summary of elements analyzed by ICP–MS and quality control data, including estimates of precision 9

Miscellaneous Release—Data 206

Lake Sediment and Water Analytical Data for the Upper Manitou Lake Area, Northwestern Ontario
by V.E. Felix.

Lake sediment geochemical and lake water quality (limnological) data, including quality control data, collected from a survey of 1087 sites in the Upper Manitou Lake area, are being released in conjunction with Open File Report 6194. Data are available as Microsoft® Excel files on one CD-ROM.

Abstract

The Ontario Geological Survey (OGS) carried out a helicopter-supported high-density lake sediment and water geochemical survey of the Upper Manitou Lake area of northwestern Ontario during the summer of 2004. The survey area is located approximately 240 km northwest of Thunder Bay and covers an area represented on National Topographic System (NTS) 1:50 000 scale map sheets 52 F/7 (Upper Manitou Lake) and 52 F/8 (Stormy Lake). Lake sediment and/or water samples were collected from a total of 1087 lake sites and analyzed for a suite of over 50 elements. Preliminary interpretation of these analyses indicates 12 geochemically anomalous areas, including anomalous results for Au, Ag, Cu, Ni, Mo, Cr and Zn. As of September 2006, many of these areas were available for staking. Digital data for this report are available separately as Miscellaneous Release—Data 206 (MRD 206).

Upper Manitou Lake Area High-Density Regional Lake Sediment and Water Geochemical Survey, Northwestern Ontario

V.E. Felix[1]
Ontario Geological Survey
Open File Report 6194
2006

---

[1]Sedimentary Geoscience Section, Ontario Geological Survey

Introduction

Field work for a high-density lake sediment and water geochemical survey for the Upper Manitou Lake area was carried out from June 9 to July 1, 2004. The survey area is located approximately 240 km northwest of Thunder Bay (Figure 1) and covers an area of approximately 2000 km^2. The survey area is represented on National Topographic System (NTS) 1:50 000 scale map sheets 52 F/7 (Upper Manitou Lake) and 52 F/8 (Stormy Lake). Lake sediment and/or water samples were collected at a total of 1087 sites, providing an average density of 1 sample per 1.9 km^2.

The Upper Manitou Lake area was selected for this type of survey for reasons that include client interest, geology with favourable mineral potential and a lack of detailed geochemical exploration data for the region. The present survey lies immediately south of the Sturgeon Lake–Wabigoon Lake lake sediment survey carried out in 2001 (Russell 2004). The National Geochemical Reconnaissance (NGR) lake sediment program carried out by the Geological Survey of Canada in 1988 covered the current survey area (Hornbrook and Friske 1989), but at a much broader scale (an average of 1 sample per 13 km^2). The results of the current program will provide new regional geochemical data at a relatively high resolution.

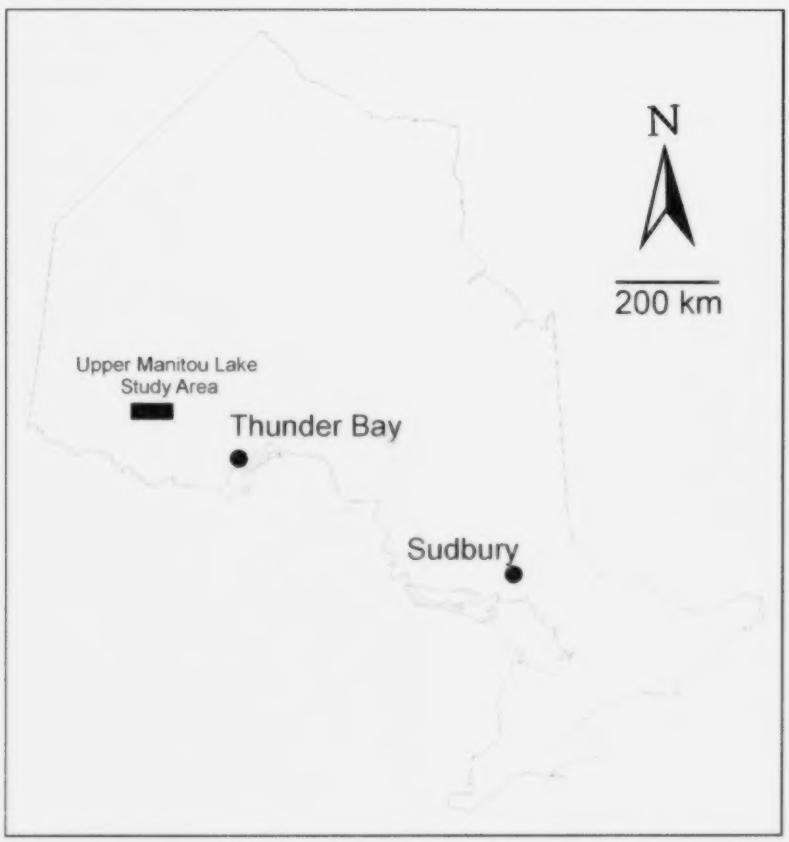


Figure 1. Location map of the Upper Manitou Lake survey area.

Regional Setting

BEDROCK GEOLOGY

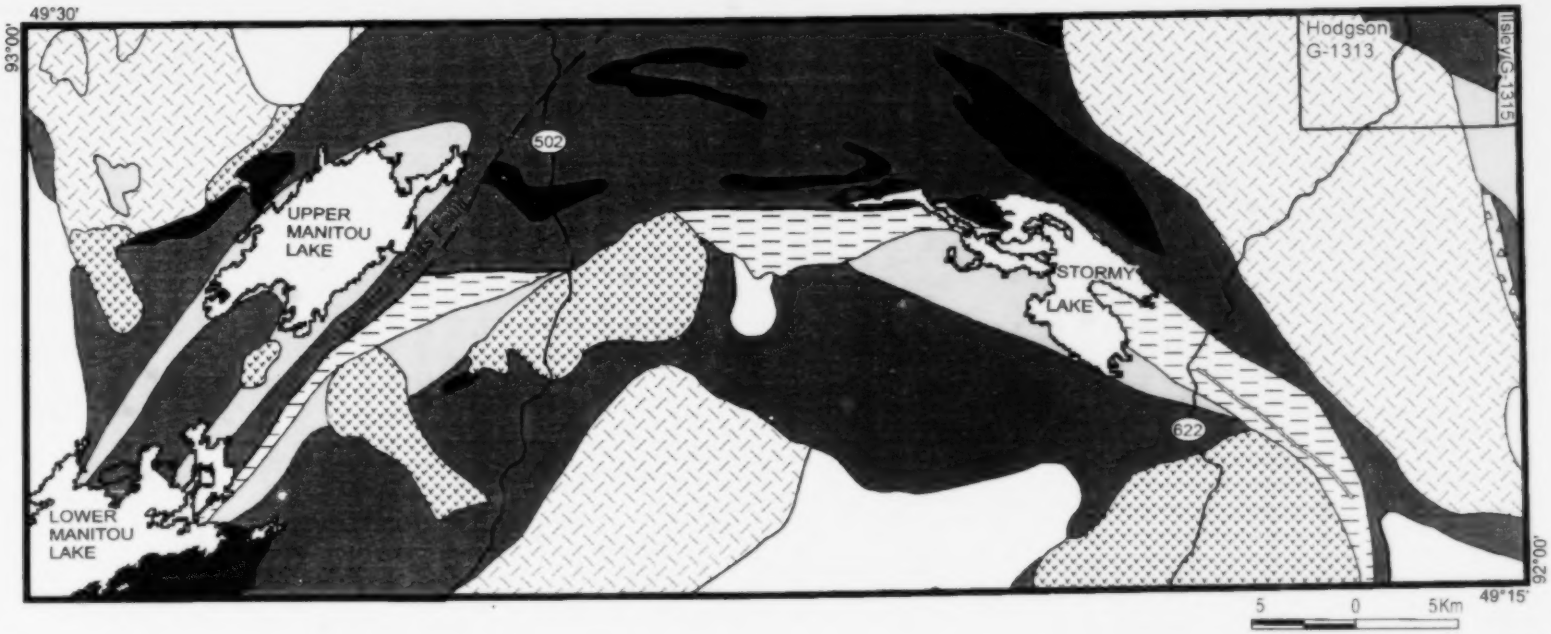
The Upper Manitou Lake survey area lies within the western Wabigoon Subprovince, a granite-greenstone terrane of the Superior Province. The survey area encompasses most of the Eagle–Wabigoon–Manitou lakes greenstone belt (Figure 2). This greenstone belt is an arcuate structure 20 km wide and 80 km long, extending from Lower Manitou Lake in the west to Bending Lake on the east, and tapering at either end (Blackburn 1982a). To the southwest, the belt can be traced uninterrupted, via Kakagi Lake, to Lake of the Woods; to the north the belt joins with metavolcanic rocks that extend northward towards Dryden (Blackburn 1979).

In general, the greenstone belt consists of a lower mafic metavolcanic unit (Wapageisi group), middle mixed intermediate to felsic metavolcanic and metasedimentary units (Manitou Lake and Stormy Lake groups) and an upper mafic to intermediate metavolcanic unit (Upper Wabigoon Volcanic and Boyer Lake groups). The massive to pillowed magnesium and iron-tholeiitic, and komatiitic rocks of the Wapageisi group are conformably overlain by calc-alkalic pyroclastic rocks, minor mafic flows and associated sediments of the intermediate Manitou Lake metavolcanic group (Blackburn et al. 1991).

The western portion of the survey area is cut by the northeast striking Manitou Straits fault. A fault of considerable magnitude, it extends through the Manitou straits and northward to Kabagukski Lake. The fault is marked by a zone of highly fissile phyllitic and schistose rocks and is no more than 30 m wide (Blackburn 1982a).

Supracrustal rocks are intruded by a number of granitic bodies including the Atikwa batholith to the northwest, the Irene-Eltrut Lakes batholithic complex in the south-central portion of the survey area and the Revel batholith to the west. As well, 2 smaller plutons, the Taylor Lake pluton (~2695 Ma) and the Scattergood Lake pluton (~2700 Ma) occur within the Eagle–Wabigoon–Manitou lakes greenstone belt. Many of these small, late plutons exhibit a close spatial relationship with gold ± copper ± molybdenum mineralization (Blackburn 1981).

Regional bedrock mapping shows that most past producing mines and mineral showings are concentrated in and adjacent to the northeast-trending sequences of metavolcanic and metasedimentary rock. Mineral deposits occur in a variety of lithologies including volcanic, sedimentary and deformed granitoids. Precious metals (Au, Ag, Pt) and associated sulphides are the most common mineralization (Minning et al. 1994).



ARCHEAN

- Massive granodiorite to granite
- Diorite-monzonite-granodiorite
- Muscovite bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic intrusive rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to intermediate metavolcanic rocks
- Faults

Figure 2. Generalized bedrock geology of the Upper Manitou Lake area (from Ontario Geological Survey 1991).

ARCHEAN

- Massive granodiorite to granite
- Diorite-monzonite-granodiorite
- Muscovite bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic intrusive rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to intermediate metavolcanic rocks
- Faults

Figure 2 Generalized bedrock geology of the Upper Manitou Lake area (from Ontario Geological Survey 1991).

PHYSIOGRAPHY AND QUATERNARY GEOLOGY

Engineering geology terrain maps have been produced for the study area at a scale of 1:100 000 (Roed 1980). The Geological Survey of Canada also produced detailed surficial maps for the survey area at the same scale (Minning et al. 1994). Quaternary sediments in the survey area are described as generally thin and patchy, with the exception of the Eagle–Finlayson Moraine and in areas where glaciolacustrine deposits of glacial Lake Agassiz fringe the moraine (Figure 3). The Eagle–Finlayson Moraine is a sharp-crested, single ridge moraine composed of sand and gravel that rises over 30 m above the surrounding land and can be traced for over 240 km (Zoltai 1961).

Topography in the Upper Manitou lakes area is typical of that of much of the Canadian Shield, consisting of rolling and knobby rock-buttressed landforms with numerous lakes and bogs (Roed 1980). Topography and drainage patterns in the area are a result of modification by the scouring action of glacial ice upon various bedrock lithologies and structures (Blackburn 1979). Relief in the survey area is variable and ranges from 371 to 457 m asl (Roed 1980).

Methodology

SAMPLING METHODS

Sediment sampling was performed primarily by a 2-person team from a float-equipped Bell 206B helicopter. However, where access was available and the number of samples warranted, some lakes were sampled from an aluminum boat with a 25-horsepower motor. Overall, an average of 15 lakes were sampled for each hour of helicopter time. The samples were collected using a gravity corer designed by the Ontario Geological Survey (OGS). Samples were taken from depths >20 cm below the sediment–water interface (SWI) in order to minimize or avoid anthropogenic influences and SWI effects. These deeper sediments more accurately reflect the natural geochemical inputs, which may be traced back to local bedrock geology (Dyer 1998). The samples were extruded from the collection tube into breathable fabric bags and then placed in a sealable plastic bag until the end of the sampling run.

Lake water samples were taken simultaneously with the sediment samples. On lakes <2 m deep, water samples were collected at a depth of 0.5 m below the water surface, whereas on lakes deeper than 2 m, samples were collected at a depth of 2 m. A semi-automated water sampling apparatus, developed by the OGS, was used for the collection of samples. The apparatus consists of a submersible pump, a water quality meter (YSI) for measurement of parameters such as pH, temperature and conductivity, a sample bottle tray and a variety of hoses and valves. Water from the lake was pumped through the system in order to purge it prior to the collection of a sample and the recording of water quality data. The water samples were kept cool immediately following collection and were processed (filtered and acidified) within 24 hours of collection.

Sample site locations were recorded using a GPS receiver mounted in the cockpit of the helicopter. A customized database application operating from a pen-based computer was used to record the sediment sample information and descriptions. Water quality data was captured from the YSI multi-parameter instrument using a dedicated handheld data recorder. Water quality data were downloaded from the YSI daily using the program Ecowatch™.

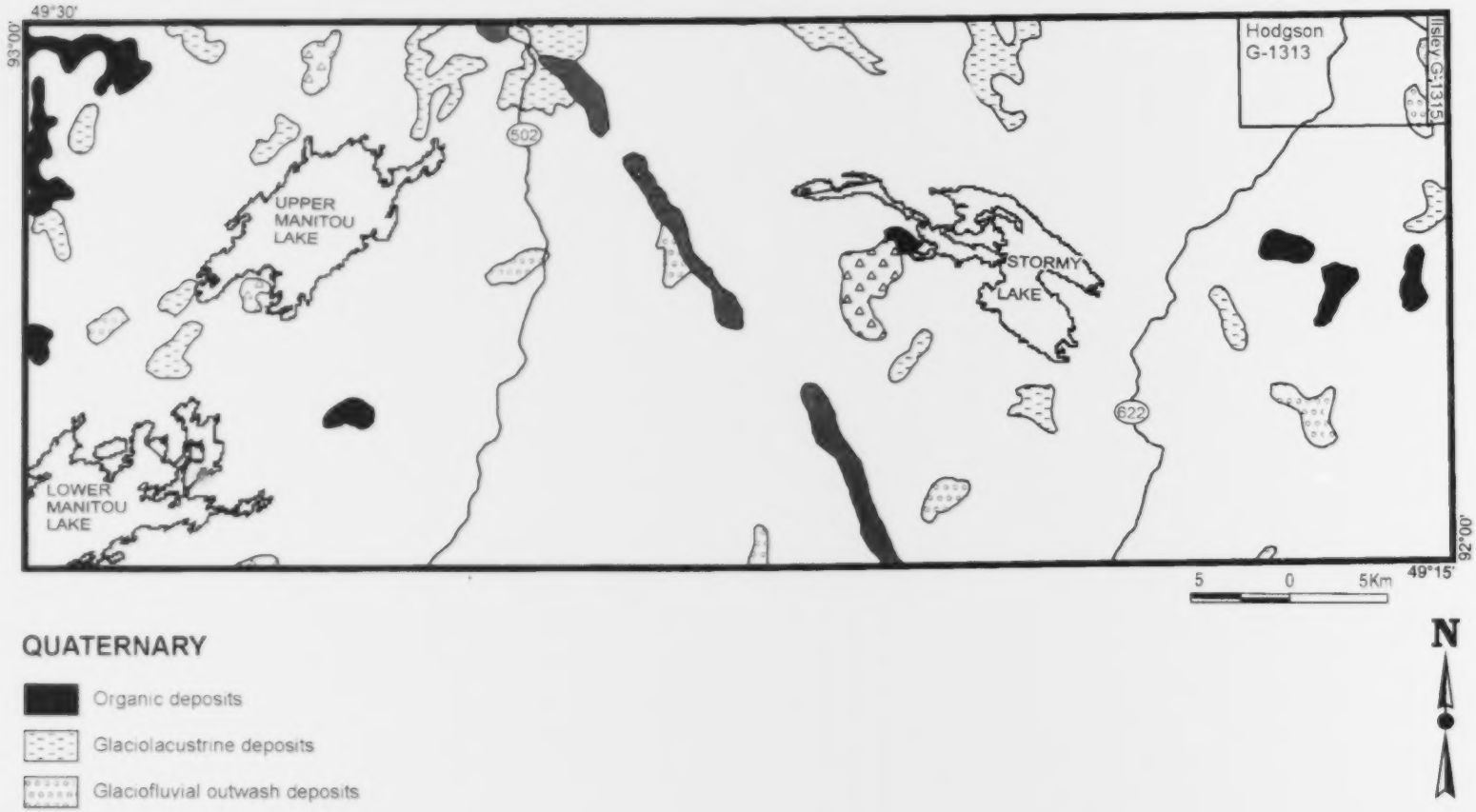


Figure 3. Generalized Quaternary geology of the Upper Manitou Lake area (from Barnett, Henry and Babuin 1991).

SAMPLE PREPARATION AND ANALYTICAL METHODS

Sediment samples were allowed to partially air dry in porous collection bags in the field prior to delivery to the OGS Geoscience Laboratory (GeoLabs). A total of 988 sediment samples were submitted to the laboratory. The samples were freeze-dried, partially pulverized in a ceramic ring mill and sieved to obtain the –60 mesh (<250 µm) size fraction.

Laboratory analysis by GeoLabs consisted of nitric-aqua regia digestion of 0.5 g of sample pulp followed by inductively coupled plasma mass spectrometry (ICP–MS) and inductively coupled plasma optical emission spectrometry (ICP–OES) for the determination of approximately 50 trace and major elements. Nitric-aqua regia digestion attacks all sample matrix constituents except for silicate minerals and is, therefore, considered a non-selective, relatively strong partial extractant (Dyer 1998). GeoLabs also performed determination of loss-on-ignition (LOI) at 500°C under an oxygen atmosphere using an automated gravimetric technique.

Instrumental neutron activation analysis (INAA) using epithermal irradiation was performed by an external laboratory. Approximately 10 g of each sample pulp was pressed into briquettes prior to analysis by instrumental neutron activation analysis (INAA) for gold and a suite of 26 other elements. There was sufficient material to analyze 898 samples by INAA.

Water samples were passed through 0.45 µm syringe filters and acidified to 1% with ultrapure nitric acid within 24 hours of collection. Analysis of water included direct aspiration ICP–MS to determine approximately 50 elements including major cation and anion species. A total of 1087 water samples were submitted to the GeoLabs for analysis.

Quality Control (QC) Results

METHODS

Quality control was monitored through sample pulp duplicates and certified reference materials ("standards") inserted randomly into the sample sequence. Approximately 10% of sediment samples submitted was a quality control (QC) sample. Each QC sediment sample consisted of either analytical (pulp) duplicates, certified reference standards (CRS) or an internal (OGS collected) bulk standard. Analytical pulp duplicates were prepared by halving randomly chosen sample pulps and inserting them into the sample sequence. CANMET certified reference standards (LKSD-1 and LKSD-4, Lynch 1990) and 2 OGS internal standards were also inserted as dried pulps between the sample preparation and analysis stages. In addition, to avoid confusion between numerically sequential geochemical patterns due to geographical groupings versus systematic analytical or sample preparation errors, the samples were randomized by assigning each a new laboratory number prior to submission to the laboratory. Therefore samples were analyzed in a random sequence and not in the order in which they were collected.

Analytical precision for each element was determined by plotting duplicate data on an X–Y chart and determining the variation of 95% of the data from a 1:1 ratio. Accuracy was determined by plotting the sequential values returned for certified reference standards inserted in the batch against a vertical scale of concentration and comparing this with the "provisional values" (Lynch 1990) for the standards. The mean and standard deviation of values returned for each standard were also compared with the provisional values.

Table 1 contains a summary of the lake sediment analytical data used to generate this report, including some basic statistics and estimates of precision for each element and coefficients of variation

for the certified reference materials. A full listing of data used to prepare this table is contained in MRD 206 (published separately from this report).

Quality control results for lake waters are shown in Table 2. Quality of the analyses was monitored through the use of sample duplicates, certified reference standard SLRS-4 and blanks (distilled water).

GENERAL ASSESSMENT: LAKE SEDIMENTS

Inductively Coupled Plasma Mass Spectrometry and Inductively Coupled Plasma Optical Emission Spectrometry

In general, the quality of the ICP–MS and ICP–OES data sets is excellent. There are no problems worth noting other than for Hg. The sample and solution preparation (acid digest) employed by this survey were not optimal for Hg determination, however, the QC screening indicates the data set is acceptable for publication and is, therefore, included in this report and the digital data release. The estimated precision of ±0.01 for Hg is somewhat better than in previously released lake sediment surveys.

Noise in the QC standards for the elements Hf, Nb, Sn and W can be attributed mostly to the natural low levels for these elements in lake sediment and the incomplete and varying digestion of the silicate phase within which these elements are most likely bound. This incomplete digestion is demonstrated by the low mean levels returned for many of the lithophile major and minor elements shown in the LKSD-1 and LKSD-4 results (*see* Table 1). For example, the certified level of titanium (Ti) in LKSD-1 is 3010 ppm obtained by total digestion (Lynch 1990). The mean result for Ti in LKSD-1 obtained by this study was 262 ppm via the "near total" aqua regia digestion.

Analytical results for Sn by ICP-MS were almost entirely below the method detection limit of 0.7 ppm. Also, significant noise in the QC standards for this element has proven it to be unacceptable for publication and it has therefore been removed from the lake sediment data set.

Instrumental Neutron Activation Analysis

Overall, the quality of the instrumental neutron activation analysis (INAA) was excellent. The estimated precision of ±5 ppb for Au is typical for the INAA method in previous OGS experience. Noise in the certified reference standards was observed, however, and suggests that only Au values above 7 should be considered significant. The accuracy of this data is also poor and is reflected in the high coefficients of variation as shown in Table 1. Survey results for Au in lake sediment are typical and are likely due to the severe inhomogeneity of gold concentrations in surficial media samples (classic nugget effect). Dyer (2005) provides a discussion of other factors (e.g., insufficient sample size) that may have an impact on gold values observed in lake sediments.

Some caution should be used when interpreting Ta, as this element shows significant noise in the QC standards and therefore may contain inflated analytical results throughout the sample sequence.

Table 1: Upper Manitou Lake area lake sediment data set, summary of elements analyzed by ICP and INAA and quality control data, including estimates of precision

				Lake Sediment				LKSD-1 Reference Standard			LKSD-4 Reference Standard		
Element	Analytical Method	Units	MDL	Median	RANGE Min	RANGE Max	Estimated Precision	Certified Value	Mean Q.C. Result	Coefficient of variation (%)	Certified Value	Mean Q.C. Result	Coefficient of variation (%)
Ag	ICP-MS	ppm	0.04	0.12	<0.04	0.97	± 0.03	0.6	0.65	26.2	0.2	0.23	3.0
Al	ICP-OES	ppm	20	12509	2503	31436	±3000	41300	3895	9.5	31200	12280	5.2
As	INAA	ppm	0.5	2.9	<0.5	52.3	±0.9	40	37.9	3.9	16	16.3	3.8
Au	INAA	ppb	2	<2	<2	64	±5	5	2	107.0	2	<2	85.7
Ba	ICP-MS	ppm	0.5	79.8	16.6	570.6	±5	430	92.7	2.7	330	135.8	1.6
Be	ICP-MS	ppm	0.2	0.36	<0.2	2.0	±0.1	1.1	<0.2	0.0	1	0.4	8.2
Br	INAA	ppm	0.5	39.0	1.8	168	±3	11	10.7	5.9	49	49.2	1.7
Ca	ICP-OES	ppm	500	7650	1806	190750	±800	77200	70038	3.7	12900	9738	3.4
Cd	ICP-MS	ppm	0.04	0.46	0.15	1.47	±0.03	1.2	1.33	6.1	1.9	2.0	1.7
Ce	ICP-MS	ppm	0.2	48.2	5.2	300.0	±4	27	17.5	4.9	48	39.2	5.2
Co	ICP-MS	ppm	0.04	7.95	1.28	59.73	±1	9	7.50	3.4	11	8.68	3.4
Cr	ICP-MS	ppm	1.0	22.1	3.8	83.7	±4	12	12.2	16.0	21	20	10.5
Cs	ICP-MS	ppm	0.01	0.92	0.34	4.49	±0.2	1.5	0.5	3.6	1.7	1.1	5.3
Cu	ICP-MS	ppm	0.4	43.7	6.6	403.6	±2	44	42.3	3.0	30	30	1.7
Dy	ICP-MS	ppm	0.02	1.98	0.43	10.10	±0.2	-	1.70	3.9	-	2.92	2.6
Er	ICP-MS	ppm	0.02	0.98	0.21	4.59	±0.1	-	0.95	5.2	-	1.65	1.9
Eu	ICP-MS	ppm	0.01	0.80	0.13	4.00	±0.05	-	0.46	5.0	-	0.89	2.6
Fe	ICP-OES	ppm	20	14792	2297	>135000	±5000	18000	18638	9.8	27000	26767	5.5
Ga	ICP-MS	ppm	0.09	2.62	0.43	8.46	±0.5	-	2.01	5.5	-	3.95	3.9
Gd	ICP-MS	ppm	0.03	3.35	0.58	23.20	±0.4	-	2.28	4.1	4.01	3.88	2.9
Hf	ICP-MS	ppm	0.02	0.03	<0.02	0.30	±0.03	3.6	0.04	17.6	0.04	0.03	15.6
Hg	ICP-MS	ppm	0.08	0.10	<0.08	0.39	±0.01	110	0.13	6.7	190	0.19	6.1
Ho	ICP-MS	ppm	0.006	0.36	0.08	1.73	±0.03	-	0.34	4.6	0.6	0.58	2.4
K	ICP-OES	ppm	20	488	159	3618	±200	9100	389	7.6	6600	889	8.1
La	ICP-MS	ppm	0.1	26.0	3.3	200.0	±2	16	10.3	3.7	26	20.8	2.3
Li	ICP-MS	ppm	0.3	5.4	0.8	32.3	±2	7	4.2	7.0	12	8.7	6.7
LOI	Grav.	%	0.05	46.50	9.96	87.97	±1	23.5	23.7	2.1	40.8	41.80	0.8
Lu	ICP-MS	ppm	0.005	0.13	0.03	0.60	±0.01	0.4	0.13	6.1	0.5	0.24	2.2
Mg	ICP-OES	ppm	6	1787	482	17240	±800	10300	5921	3.8	5400	3684	3.9
Mn	ICP-OES	ppm	0.7	418	21	>12000	±80	460	383	10.0	430	393	7.0
Mo	ICP-MS	ppm	0.06	1.61	0.26	49.90	±0.2	12	9.70	2.4	2	1.75	3.9
Na	ICP-OES	ppm	10	95	37	729	±50	14800	258	10.7	5200	195	10.9
Nb	ICP-MS	ppm	0.04	0.70	0.15	3.60	±0.4	7	0.50	20.4	9	1.08	9.3
Nd	ICP-MS	ppm	0.09	22.50	3.01	200.00	±2	16	11.36	4.1	25	20.92	2.0
Ni	ICP-OES	ppm	1	23	5	128	±8	11	14	11.8	32	35	9.1
P	ICP-OES	ppm	10	1041	262	>4800	±110	900	702	7.8	1300	1300	5.6
Pb	ICP-MS	ppm	0.3	5.0	1.5	30.4	±0.4	84	80.9	2.7	93	91.1	1.5
Pr	ICP-MS	ppm	0.03	6.21	0.79	40.00	±0.5	-	2.80	4.3	-	5.49	2.1
Rb	ICP-MS	ppm	0.06	5.98	2.18	35.80	±3	24	3.47	4.5	28	9.74	5.1
S	ICP-OES	ppm	20	3732	606	24060	±275	15700	14354	5.4	9900	9349	4.0
Sb	ICP-MS	ppm	0.03	0.12	<0.03	1.49	±0.02	1.2	0.62	6.5	1.5	1.20	2.6
Sc	ICP-MS	ppm	0.09	2.70	0.37	8.93	±1.0	9	2.32	8.7	7	3.78	7.1
Sm	ICP-MS	ppm	0.04	3.95	0.61	30.00	±0.2	4	2.45	4.3	5	4.13	2.2
Sr	ICP-MS	ppm	0.9	20.9	8.7	122.7	±4	250	64.3	3.2	110	38.4	2.8
Ta	INAA	ppm	0.5	<0.5	<0.5	2.1	±0.8	0.3	0.6	58.6	0.4	0.5	60.9
Tb	ICP-MS	ppm	0.006	0.42	0.08	2.55	±0.05	0.6	0.32	4.8	1.2	0.54	2.7
Th	ICP-MS	ppm	0.02	1.24	0.02	36.81	±0.8	2.2	1.31	7.6	5.1	1.86	6.3
Ti	ICP-OES	ppm	0.8	145	27	1013	±130	3010	262	19.6	2270	372	10.8
Tl	ICP-MS	ppm	0.006	0.13	<0.006	0.45	±0.02	-	0.22	2.9	-	0.42	2.0
Tm	ICP-MS	ppm	0.006	0.13	<0.006	0.64	±0.01	-	0.13	5.0	-	0.23	3.5
U	ICP-MS	ppm	0.03	1.56	0.34	31.94	±0.1	9.7	8.71	1.9	31	29.40	1.2
V	ICP-OES	ppm	0.4	27.3	4.8	>180	±10	27	19	13.2	32	32	6.3
W	ICP-MS	ppm	0.2	<0.2	<0.2	1.1	±0.07	<4	0.65	30.5	<4	0.23	7.8
Y	ICP-MS	ppm	0.05	9.74	2.12	48.65	±1.0	19	9.96	4.8	23	16.23	2.3
Yb	ICP-MS	ppm	0.02	0.84	0.20	4.05	±0.05	2	0.85	5.4	2	1.54	2.2
Zn	ICP-OES	ppm	1	71	18	166	±12	337	313	6.3	189	186	5.1
Zr	ICP-MS	ppm	0.4	0.9	<0.4	15.0	±2	134	1.1	18.8	105	0.7	8.4

Notes:

1. ICP-MS= Inductively Coupled Plasma Mass Spectroscopy (aqua regia digestion)
2. ICP-OES= Inductively Coupled Plasma Optical Emission Spectroscopy (aqua regia digestion)
3. INAA= Instrumental neutron activation analysis
4. MDL=method detection limit
5. Estimated precision at 95% confidence level. ICP-MS, OES and INAA elements based on 50 duplicate pairs
6. For lake sediments analysis by ICP-MS and ICP-OES n=981 and INAA n=898
7. Q.C. Result = Average value obtained, Upper Manitou Lake area survey
8. Coefficient of variation at one standard deviation (68% confidence level)
9. LKSD-1 and LKSD-4 are Canmet certified reference materials.
   For ICP elements, quoted reference values for Ag, As, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, Pb, Sb, V, Zn determined by partial digestion; all other ICP elements determined with total digestion.
   For INAA elements, quoted reference values for LKSD-1 and LKSD-4 are from total digestion methods
10. For analysis of LKSD-1 and LKSD-4 by ICP-MS, OES and INAA, n=15.

Table 2: Upper Manitou Lake area lake water data set, summary of elements analyzed by ICP-MS and quality control data, including estimates of precision.

			Lake water (n=1171)					SLRS-4 (n=39)		
Element	Analytical Method	Units	MDL	Median	RANGE Min	RANGE Max	Estimated Precision (ppb)	Certified Value	Mean Q.C. Result	Coefficient of variation (%)
Ag	ICP-MS	ppb	0.03	<0.03	<0.03	0.13	n/a	-	<0.03	n/a
Al	ICP-MS	ppb	0.1	38.7	1.83	390.5	±40	54	59.4	39.7
Ba	ICP-MS	ppb	0.03	5.25	1.16	33.02	±2.3	12.2	13.00	2.1
Be	ICP-MS	ppb	0.008	<0.008	<0.008	1.034	±0.008	0.007	0.0	5.4
Ca	ICP-MS	ppb	200	5617	556	35913	±1500	6200	5917	5.4
Cd	ICP-MS	ppb	0.002	0.010	0.002	0.457	±0.016	0.012	0.015	19.8
Ce	ICP-MS	ppb	0.0002	0.1094	0.0019	2.5996	±0.049	0.012	0.368	2.6
Co	ICP-MS	ppb	0.006	0.021	<0.006	0.411	±0.008	0.033	0.035	5.9
Cr	ICP-MS	ppb	0.004	0.152	0.007	2.106	±0.11	0.33	0.312	5.9
Cs	ICP-MS	ppb	0.0003	0.0079	0.0008	0.1631	±0.0013	-	0.0072	25.8
Cu	ICP-MS	ppb	0.06	0.97	0.30	64.14	±3.5	1.81	2.23	28.0
Dy	ICP-MS	ppb	0.001	0.009	<0.001	0.091	±0.002	-	0.024	6.1
Er	ICP-MS	ppb	0.001	0.005	<0.005	0.050	±0.002	-	0.013	8.1
Eu	ICP-MS	ppb	0.0007	0.0027	0.0004	0.0283	±0.0029	-	0.0065	27.7
Fe	ICP-MS	ppb	0.4	39.7	1.1	1583.0	±20	103	100	3.7
Ga	ICP-MS	ppb	0.001	0.004	<0.001	0.107	±0.002	-	0.013	9.8
Gd	ICP-MS	ppb	0.001	0.012	<0.001	0.138	±0.0045	-	0.035	8.3
Ho	ICP-MS	ppb	0.003	<0.003	<0.003	0.018	±0.001	-	0.005	9.7
La	ICP-MS	ppb	0.001	0.084	0.002	1.402	±0.001	-	0.291	3.1
Li	ICP-MS	ppb	0.02	0.44	0.10	1.50	±0.09	-	0.48	5.8
Lu	ICP-MS	ppb	0.0003	0.0008	<0.0003	0.0062	±0.0004	-	0.0019	9.6
Mg	ICP-MS	ppb	50	733	213	>4000	±110	1600	1593	3.5
Mn	ICP-MS	ppb	0.08	1.51	0.15	27.28	±0.6	3.37	3.55	4.4
Mo	ICP-MS	ppb	0.005	0.045	<0.005	1.542	±0.028	0.21	0.199	5.7
Nd	ICP-MS	ppb	0.004	0.083	<0.004	1.062	±0.018	-	0.270	3.0
Ni	ICP-MS	ppb	0.08	0.30	<0.08	3.52	±0.14	0.67	0.67	5.8
Pb	ICP-MS	ppb	0.002	0.093	0.010	13.207	±0.45	0.086	0.127	55.8
Pr	ICP-MS	ppb	0.0003	0.0209	0.0003	0.29750	±0.003	-	0.0701	2.7
Rb	ICP-MS	ppb	0.07	1.34	0.24	3.65	±0.12	-	1.57	2.1
Sb	ICP-MS	ppb	0.003	0.032	0.014	0.235	±0.012	0.23	0.256	2.7
Sc	ICP-MS	ppb	0.06	0.42	0.06	1.14	±0.12	-	0.76	9.6
Sm	ICP-MS	ppb	0.002	0.014	<0.002	0.167	±0.006	-	0.058	5.7
Sn	ICP-MS	ppb	0.004	0.01	<0.004	53.576	±0.02	-	0.013	67.5
Sr	ICP-MS	ppb	2	13	3	64	±1.7	26.3	28.6	2.0
Tb	ICP-MS	ppb	0.0004	<0.0004	<0.0004	0.0150	±0.0008	-	0.0042	7.2
Th	ICP-MS	ppb	0.001	0.0150	<0.001	0.331	±0.022	-	0.009	11.8
Ti	ICP-MS	ppb	0.001	0.5900	0.117	7.4728	±0.2	-	1.705	5.6
Tl	ICP-MS	ppb	0.0002	0.0026	0.0004	0.0120	±0.0006	-	0.0063	6.8
Tm	ICP-MS	ppb	0.0003	0.0008	<.0003	0.0066	±0.00038	-	0.0018	8.9
U	ICP-MS	ppb	0.0007	0.015	0.0019	0.4200	±0.003	0.050	0.0486	2.6
V	ICP-MS	ppb	0.03	0.13	<0.03	0.74	±0.05	0.32	0.33	6.9
W	ICP-MS	ppb	0.0007	0.0016	<0.0007	0.2020	±0.0015	-	0.0046	15.0
Y	ICP-MS	ppb	0.003	0.053	<0.003	0.504	±0.007	-	0.138	2.2
Yb	ICP-MS	ppb	0.0008	0.0052	<0.0008	0.0443	±0.0013	-	0.0122	6.5
Zn	ICP-MS	ppb	0.1	1.0	<0.1	103.6	±1.7	0.93	1.4	17.6
Zr	ICP-MS	ppb	0.004	0.080	<0.004	8.851	±0.165	-	0.090	8.6

Notes:

1. ICP-MS= Inductively Coupled Plasma Mass Spectroscopy.
2. MDL=method detection limit.
3. Estimated precision at 95% confidence level based on results of 70 duplicate pairs.
4. SLRS-4= National Research Council, St. Lawrence River Standard-4; certified reference standard

GENERAL ASSESSMENT: LAKE WATERS

In general, the quality of the lake water data was excellent with no significant quality control problems in the elements reported.

A meaningful quantitative assessment of the precision of Ag was not possible due to the fact that all analyses were below the detection limit of 0.03 ppb. Performance of the certified reference standard SLRS-4 and blanks indicates, however, that the data are acceptable for release.

The full lake water data set has been included in MRD 206.

Geochemical Data Interpretation

Factors to consider when assessing the possible significance and validity of lake sediment geochemical anomalies are as follows:

1. Correlation with geology

   In mineral exploration, correlation with geology is the most important factor when assessing the significance of a surficial geochemical anomaly, however, its relative importance declines as the known level of detail of the geology declines. Many of the geochemical anomalies discussed will help focus and prioritize future geological investigations.

2. Multi-site anomalies

   Multi-site anomalies provide separate verification of the "anomalousness" of a given area and provide some insurance against non-systematic errors in sample quality, collection, preparation or analysis. However, as samples are collected, prepared and analyzed in sequence, a uniform and numerically sequential anomaly may be the result of a systematic analytical or sample preparation error. This may produce an apparent geographic grouping of fairly uniform concentrations in one, or possibly several, elements. As mentioned above, every effort has been made to detect this kind of problem but the user is reminded to consider all available data when assessing the importance of an anomaly.

3. Multi-element anomalies

   Multi-element anomalies with geologically reasonable elemental assemblages are useful in assessing the importance of many anomalies. For example, Pt and Pd, which are relatively immobile in the surficial environment compared to base metals such as Cu, Cr, Ni, Pb and Zn, would not be expected to be found in anomalous levels in lake sediment without an accompanying base metal signature. Gold on the other hand, can occur in quartz vein deposits with little or no associated base metals; therefore, a gold anomaly by itself can be significant. A gold anomaly with an associated base metal signature may be even more significant. However, certain multi-element anomalies (e.g., Mo + Zn) can sometimes result from limnological factors (e.g., redox conditions related to deep lakes, relative level of organic material in the sediment).

4. Magnitude of the anomaly

   The magnitude of an anomaly, perhaps surprisingly, is one of the least important assessment criteria. Magnitude depends not only on the size of a deposit but on its distance from the lake, the presence and effectiveness of sinks between the source and lake, the limno-geochemical conditions in the

lake, the weatherability of the deposit and the nature of the surficial deposits (i.e., level of carbonate). The weatherability depends on factors such as exposure and/or depth of burial and specific mineralogy of the source. These factors combine to make magnitude an unreliable estimate of the importance of an anomaly except in extreme cases or in cases where multiple samples and/or media corroborate its importance.

5. Correlation with surficial geology

Unconsolidated deposits can, under certain circumstances, cause a greater impact on the chemistry of lake media than can bedrock. Carbonate-rich eskers and thick, ice-contact stratified drift deposits often result in nearby lakes having relatively hard, alkaline waters. This type of lake water provides a geochemical matrix for trace elements which is very different to that of most shield lakes which are mildly acidic and organic-dominated. In general, most metals are relatively immobile in such alkaline conditions, therefore geochemical anomalies might be considered more significant and possibly relatively close to source.

Dilution or addition to the trace metal signature in sediments can occur due to the presence of fine-grained unconsolidated material such as clay. Often a spatial relationship can be seen between lake sediment anomalies and glaciofluvial deposits such as eskers. In general, the sample collection and preparation protocols employed by the OGS, when properly carried out, minimize the deleterious effects of exotic inorganic materials which may be present in the survey areas.

6. Redox conditions, lake depth and organic content

Not all spatial trends in geochemistry are due to lithological or mineralogical factors. The solubility of trace metals depends to a large extent on the geochemical matrix and, in particular, on pH and oxidation–reduction (redox) conditions. Redox conditions in a lake are usually controlled by thermal conditions which, in turn, are controlled by lake morphology and lake depth. If conditions are suitable for an element to preferentially partition into the lake sediment, factors that may influence (enhance) the concentration of the element include the abundance of Fe, Mn and organic material. The mechanisms that may lead to "false anomalies" include sorption (scavenging) by hydrous oxides of Fe and Mn and the affinity of some elements to form organo-metallic complexes. Enrichment of some elements in the shallow (surface to 10 cm deep) sediment can occur due to the upward migration and precipitation or concentration of Fe and Mn (and other trace elements such as Co, Pb, Mo and Zn originally co-precipitated with Fe and Mn). The OGS sampling technique avoids the surface sediment and targets the deep (>20 cm) sediment thereby reducing or minimizing the effects Fe, Mn and base metal enrichment that may occur in the surface sediment, whether by redox cycling or by anthropogenic input. This assumes a similar sedimentation rate in all of the sampled lakes and that the lake sediments deposited over the past several hundred years being undisturbed. This may not always be true. Sedimentation rates can vary depending on the energy of and the input to the depositional environment. Other factors to consider are sediment slumpage and/or mudslides, the effects of wavebase and the activities of animals. Therefore, the inadvertent collection of some "mixed" (shallow and deep sediment) samples is unavoidable.

Discussion of Regional Patterns

LIMNOLOGICAL PARAMETERS

Electrical conductivity (EC) values in lake waters obtained in the survey area range from less than 10 to 176 µS/cm, with an average of 38 µS/cm and a median of 27 µS/cm. The relatively low lake water

conductivities (and therefore low element loadings into the lakes) throughout the study area is consistent with the lack of thick, continuous glacial drift cover. The observed patterns may, in part, reflect bedrock geology. For example, most of the conductivity values greater than the 90th percentile of the data set (>79 µS/cm) occur in areas underlain by, or in close proximity to, bedrock mapped as either metavolcanic or metasedimentary rocks. The lower values of the data set occur in primarily granitic bedrock areas. Some of the highest values are found in close proximity to roads or highways, which may suggest some influence from contaminants (road salt, etc.).

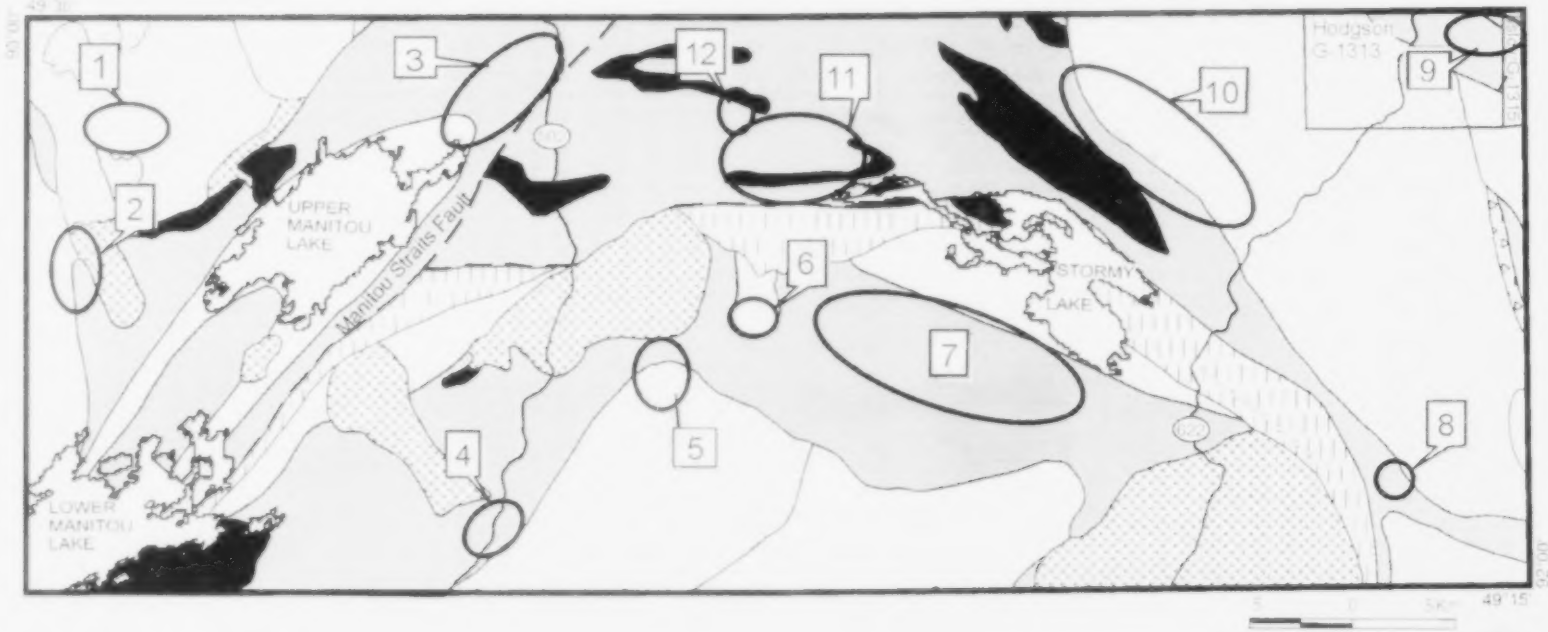
Values for pH in lake waters range from 4.20 to 8.79, with an average of 7.28. As with electrical conductivity, bedrock geology appears to be the major factor affecting pH values. Greenstone belt rocks show a more alkaline response (average pH of 7.57) whereas granitic rocks are slightly acidic (average pH of 6.85). Acidic conditions in the eastern portion of the survey area are typical of the Canadian Shield and reflect the low buffering capacity of granitic rocks and the lack of any significant surficial materials to provide buffering capacity. Neutral to alkaline pH values in the north central portion of the survey area may reflect the underlying bedrock geology (i.e., greenstone belt rocks, in particular mafic rocks with a naturally higher level of Ca). This response may also be evidence for the presence of carbonate bearing drift material. Minning et al. (1994) have documented the presence of some carbonate clasts and some carbonate rich drift in the region.

LAKE SEDIMENT GEOCHEMISTRY

The lake sediment anomalies shown in Figure 4 and discussed in the following section are those which are of greatest interest for mineral exploration purposes. The selection is based not only on the geochemical results, but also takes into account such factors as the geology and regional geophysics. In some areas of the study area, sample site density was relatively poor; therefore, this survey was not able to geochemically assess all of the drainage catchments. When following up the results of this survey, the reader is encouraged to consider pathfinder elements, such as copper and silver, which are associated with gold occurrences in the Upper Manitou Lake survey area. The following discussion is not exhaustive and the reader is encouraged to undertake further investigation utilizing all available exploration data sets.

Proportional dot maps for LOI, lake depth, pH and electrical conductivity were plotted on a generalized bedrock geology map of the study area and are shown in Appendix 1. Proportional dot maps of analytical results for Ag, As, Au, Be, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Li, Mn, Mo, Ni, Pb, REEs, Sb, Ta, Th, U, V, W, Zn and Zr are contained in Appendix 2. Appendix 3 contains a listing of lake sediment analytical data for most of these elements. In this report, samples with less than 10% LOI (approximately 2% of the data set) were not included in the data used for the production of the geochemical dot plots in Appendix 2. Samples with a low amount of organic matter tend to suppress the trace element signature due to the relative abundance of resistant quartz- and feldspar-rich material. Exceptions to this may include PGEs, which may show anomalous results in low-organic samples, especially when those samples were collected in the vicinity of mafic to ultramafic bedrock. All data, regardless of LOI value, have been included with the digital data released in conjunction with this report.

For most elements, concentrations exceeding the 90th percentile of the data set are defined as "elevated", concentrations greater than the 95th percentile are "anomalous" and concentrations greater than the 98th percentile are "highly anomalous". In some cases, precision estimates prohibited using these cut-off levels, so readers are encouraged to consult the legend that is included with each figure. Elemental concentrations of Au exceeding 7 ppb are considered to be anomalous and therefore of interest.



ARCHEAN

- Massive granodiorite to granite
- Diorite-monzonite-granodiorite
- Muscovite bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic intrusive rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to intermediate metavolcanic rocks
- Faults

Figure 4 Location of selected geochronologic investigations in the Manitou Lake–Stormy Lake area.

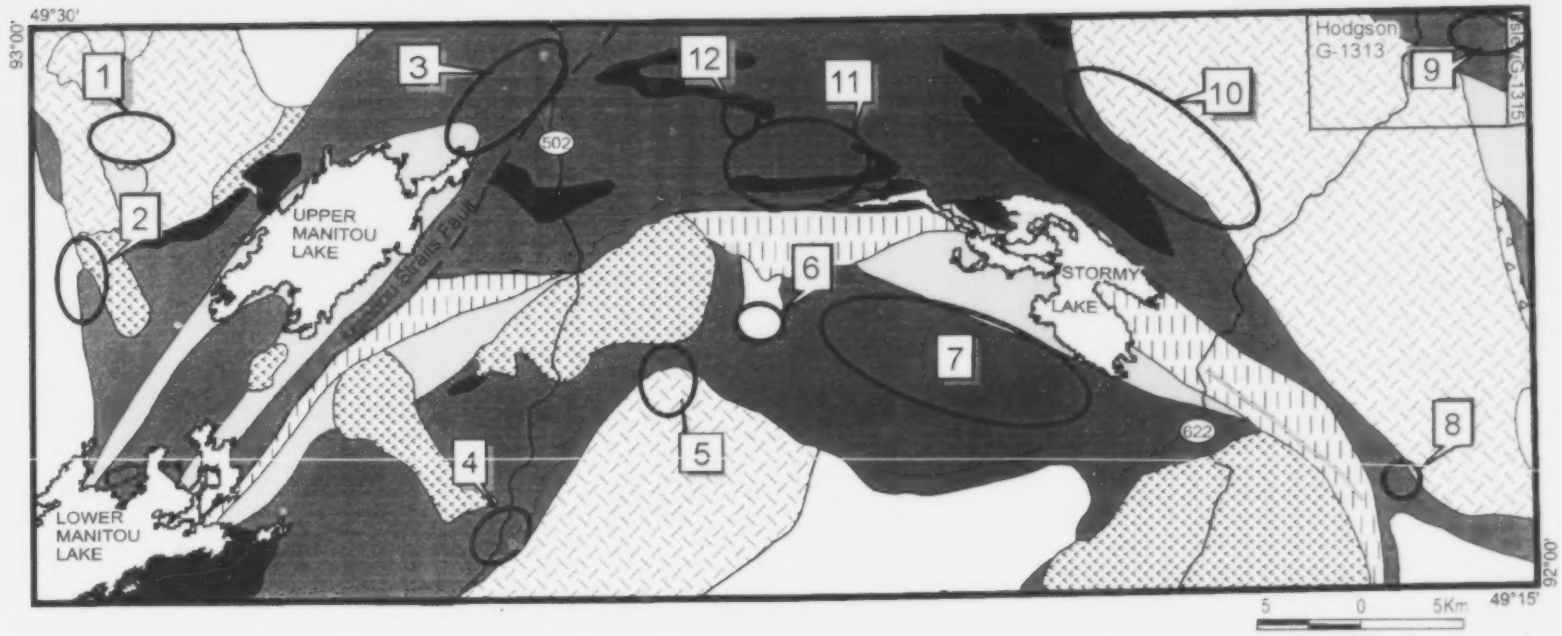


Figure 4. Location of selected geochemically anomalous lake sediment areas.

As of September 2006, many of the areas discussed in this report were available for staking. The approximate state of land tenure for the study area is shown in Figure 5. Readers are referred to the MNDM Provincial Recording Office for an up-to-date and precise description of the availability of land for staking. Sites referred to in the following discussion can be found on the sample location map (Figure 6, backpocket).

Description of Anomalous Areas

1. Wawapus Lake (Harper Lake area) Zn, Cs, Li, ±Au, ±Ag ±Pb, ±Cr, ±Ni, ±Co, ±Th, ±Ta, ±Be

   Sites: 557-559, 564-565, 710, 712-714

This multi-site, multi-element anomaly featuring Zn occurs near the contact of the Atikwa batholith and the Eagle–Wabigoon–Manitou lakes greenstone belt. Zinc concentrations were elevated at Sites 710 and 712 (105 and 111 ppm, respectively) and highly anomalous at Sites 557, 559, 564-565, 713-714 where concentrations range from 131 ppm to 141 ppm. Hornbrook and Friske (1989) report a zinc value of 131 ppb in lake sediments on Wawapus Lake near Site 710 supporting the results of the current survey.

Of interest is Site 714 which in addition to Zn, yielded highly anomalous (>99th percentile) levels of Ag (0.46 ppm) and a Au value of 10 ppb.

The bedrock geology in this area was mapped by Blackburn (1982b) as felsic intrusive rocks; however, the area southeast of Wawapus Lake consists of mafic to intermediate metavolcanic rocks. The 2 different rock types are reflected in the lake sediment; the presence of felsic intrusive rocks with diorite and amphibolite has resulted in a distinctively mixed signature. Acidic landscape conditions (low pH and low buffering capacity) over granitic rocks may contribute to enhanced Zn-Pb concentrations; therefore, some level of caution is advised when interpreting these anomalies.

As of September 2006, this entire area was available for staking.

2. Butterfly Lake–Pothole Lake area (Harper Lake area) Mo, ±Cs, ±Be, ±Ag, ±Li, ±As, ±Sb, ±Co

   Sites: 701, 704, 707-708, 819

This anomalous area consists of a small cluster of lakes all returning anomalous concentrations of Mo. Molybdenum concentrations range from 5.87 ppm on Butterfly Lake (Site 708) to 8.63 ppm (Site 707) from a lake immediately to the south. This area is underlain primarily by felsic intrusive rocks of the Atikwa Batholith. The only documented Mo occurrence in the region is located south of this area near Olsen Bay on Lower Manitou Lake. Molybdenite occurrences scattered along the metavolcanic-granite contact zone around the eastern end of the Atikwa Batholith appear to be associated with quartz or quartzose pegmatite veins (Blackburn 1979).

As of September 2006, this area was available for staking.

3. Northeast of Goldrock (Harper Lake area) ±Au, ±Ag, ±Sb, ±As, ±Cr, ±Cu, ±V, ±Th, ±Co, ±Li, ±Fe

   Sites: 668-670, 586

Four sites located northeast of the historic Gold Rock mining camp make up this anomaly. Site 586, located approximately 1 km northeast of the former town of Gold Rock, returned a Au value of 45 ppb.

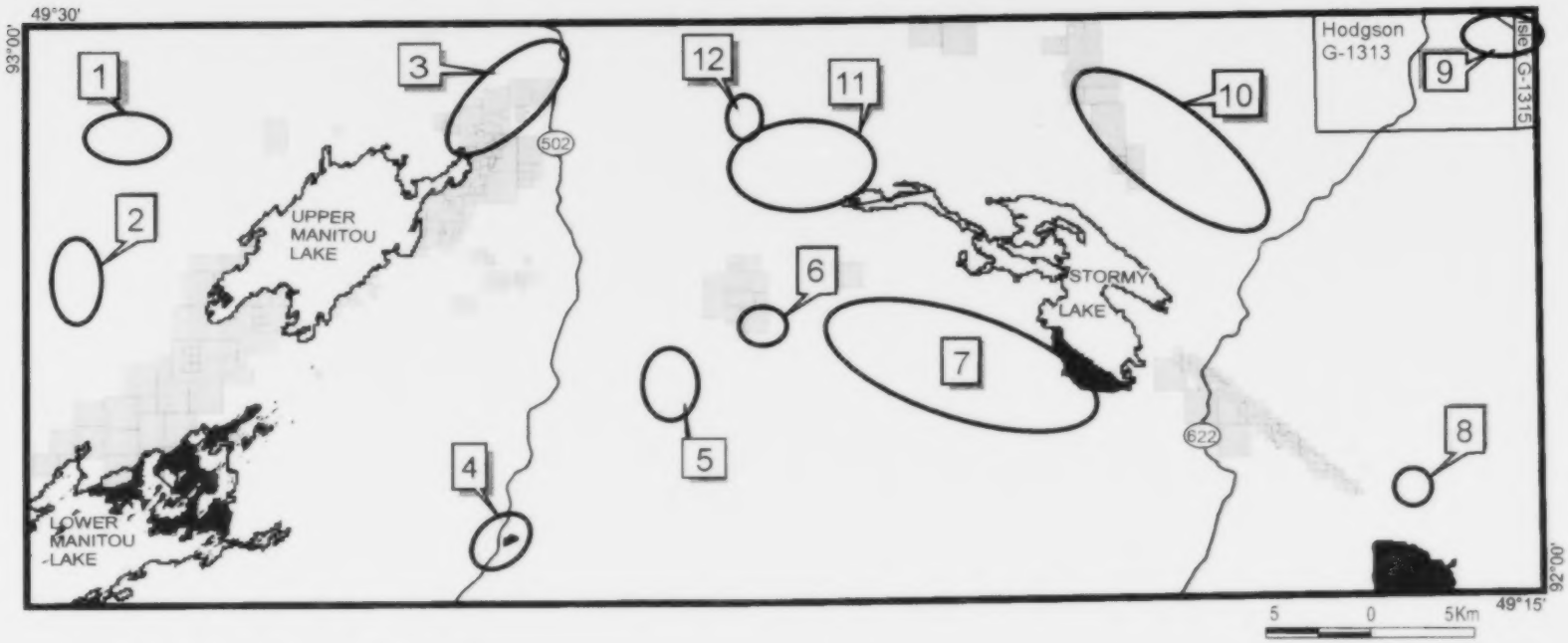


Figure 5. Approximate land tenure showing geochemically anomalous areas described in text.

the second highest value of the survey. This site lies less than 1 km north of the past producing Laurentian Mine which produced 8143 oz of Au from the 1930s to the late 1940s (Lichtblau et al. 2005). This site also returned highly anomalous Cr (50.11 ppm) and V (58.4 ppm) as well as elevated Fe, Th and Co. The mode of occurrence at the Laurentian zone is strong sericite-carbonate±carbonate schist centred around quartz veins.

Other interesting results include highly anomalous Ag from 2 small lakes located further northeast; sites 669 (0.3 ppm) and 670 (0.52 ppm). Both of these sites returned elevated to anomalous Sb (0.34 ppm from Site 669 and 0.22 ppm from Site 670). Site 669 also returned elevated Cu (85.53 ppm) and highly anomalous As (16 ppm). Although gold was not recovered from either of these 2 sites, the presence of Au pathfinder elements As, Cu and Sb is encouraging and suggests further investigation of these sites is warranted.

Site 668 located on Summit Lake yielded a Au value of 8 ppb. Other results for this site include anomalous Mn (1158 ppm) and Co (18.25 ppm) as well as elevated As, Th, Sb, Li and Fe.

This anomalous area lies to the northwest of and parallel to the Manitou Straits fault and is underlain by both felsic metavolcanics of the Upper Manitou Lake group and mafic metavolcanics of the Blanchard Lake group (Blackburn 1980). The fold axis of the Manitou anticline runs immediately through this area. The combined lake sediment geochemistry, favourable structure, geology and known Au occurrences in this area make this setting prospective for Au exploration.

As of September 2006, the area in the vicinity of Sites 668 and 669 was available for staking.

4. West of Meggisi Lake (Megissi Lake area) Ni, ±Cr, ±Cu, ±Co, ±Be, ±Mn, ±Fe

Sites: 402, 448, 471

This area located west of Meggisi Lake, which straddles the Taylor Lake fault is anomalous primarily in Ni and Cr. Site 448 features the highest Ni value (128 ppm) of the survey area, as well as anomalous Cr (60.55 ppm). Sites 471 and 402 returned elevated levels of Ni (44 ppm and 43 ppm, respectively).

This area overlies the contact between felsic intrusive rocks of the Meggisi pluton and metavolcanic rocks of the Manitou lakes greenstone belt. Site 448 which displays an obvious Ni-Cu-Cr signature is underlain by an intruding gabbroic and peridotitic sill. The only mineral occurrence in the area is a pyrrhotite occurrence which lies northeast of site 471 (Ontario Geological Survey 1986).

This area was available for staking as of September 2006.

5. Dorothy Lake (Megissi Lake area) ±Au, ±Ag, ±Cu, ±Ni, ±Cr, ±Pb, ±Co, ±W

Sites: 884-885, 934-935

This area was identified by the presence of 2 lakes with anomalous gold values; Site 884 (38 ppb) and Site 935 (9 ppb). Three out of 4 of sites within this anomalous area also returned elevated to anomalous values of Ag. Site 934, located on Dorothy Lake, returned highly anomalous (>99th percentile) Ag (0.48 ppm). Sites 884 and 885, located on the same lake, returned 0.24 ppm and 0.35 ppm Ag, respectively. Site 934 also returned an anomalous value of Cu (125.92 ppm).

This area overlies the contact between felsic intrusive rocks of the Meggisi pluton and mafic metavolcanic rocks of the Manitou lakes greenstone belt. Blackburn (1982b) has mapped several small

felsic porphyry intrusions in this area. The Renders Au-Ag occurrence, located on the west shore of Thundercloud Lake approximately 3 km northeast of Dorothy Lake, occurs over a similar setting; at the contact of the Thundercloud porphyry. Gold and Ag values as high as 5743 ppb Au and 31.5 ppm Ag were obtained from trench samples at the Renders occurrence (Parker 1989).

As of September 2006, this area was available for staking.

6. Thundercloud Lake–Seggemak Lake — Ag, Cu, Mo, Sb, ±Au, ±Ni, ±W, ±Cd, ±Pb

Sites: 983-984, 1150

This area is underlain by the Thundercloud Lake subvolcanic intrusion, commonly called the Thundercloud porphyry which is composed mainly of quartz-feldspar porphyry. Site 984 on Thundercloud Lake returned highly anomalous Ag (0.69 ppm) and Cu (171.49 ppm) as well as a Au value of 9 ppb. Site 983, also located on Thundercloud Lake, returned both the highest Cu (403.55 ppm) and Mo (49.85 ppm) values of the survey area. This site also returned a highly anomalous value for Ag (0.36 ppm).

The Renders Au-Ag occurrence, mentioned previously, lies immediately west of this anomalous area. Goldeye Exploration Limited holds active claims in this area and is currently carrying out exploration work for Au.

As of September 2006, the east half of this area was available for staking.

7. Katisha Lake–Wapageisi Lake — Cu, ±Cd, ±Zn, ±W, ±Pb, ±Sb, ±Ag, ±Mo, ±Ni, ±Mn, ±Cs

Sites: 312, 314, 331-333, 386, 440, 488, 488-491, 501, 503, 506-509, 931, 981, 1153, 1155-1157

This area is characterized by a broad Cu anomaly extending from Site 1157 on Katisha Lake to Site 312 located east of Wapageisi Lake. Copper values were elevated to anomalous at all 23 sites in this area and range from 79.17 ppm (Site 331) to 153.56 ppm (Site 489). Cadmium values were anomalous at Sites 440, 489 and 507 (0.95 ppm, 0.74 ppm, 0.74 ppm, respectively). Elevated Zn values were returned from Sites 440 and 507 (104 ppm and 107 ppm, respectively).

Mafic metavolcanics of the Wapageisi Lake group underlie this extensive area and consist of a mixed assemblage of fine-to medium-grained massive and pillowed basalts. Minor chalcopyrite and sphalerite have been recorded in drill holes from the base of the Wapageisi Lake group (Blackburn 1982a).

As of September 2006, this area was available for staking

8. Bending Lake–Turtle River area (Bending Lake area) — Au

Site: 261

This single site, single element anomaly features the highest Au value (64 ppb) in the survey area. Blackburn (1981) has mapped this area as felsic to intermediate metavolcanic rocks. This anomalous area occurs at the southeast end of the Manitou Lakes greenstone belt and occurs near the contact with granitic rocks of the Revell Batholith. The only known mineral occurrence in this area is the Bending Lake iron prospect which lies northeast of this site (Ontario Geological Survey 2002).

Due to the lack of pathfinder elements associated with this site as well as the lack of known gold occurrences in the area, some caution is advised. The high inorganic content (LOI 12.7%) of the sample may be a contributing factor to the intensity of the Au level due to the possibility of the nugget effect. At the time of writing, this sample is being re-analyzed to attempt to repeat and verify the initial Au result.

As of September 2006, this area was available for staking.

9. North of Revell Lake (Hodgson–Isley Twp.) Au

Sites: 1, 12

This area, located on the northwest part of the Raleigh Lake greenstone belt, is composed of 2 sites (Sites 1 and 12) both of which returned anomalous values of Au (12 ppb). Geological mapping and trenching in the vicinity of site 1 by Hemlo Gold Mines Inc. identified anomalous to low gold mineralization in a zone of quartz-sericite schist (Blackburn and Hinz 1996). Trench sampling of this zone returned anomalous assays of 314 ppb Au over 6.0 m, including 621 ppb Au over 1.0 m (Blackburn and Hinz 1996).

This area is underlain by felsic to intermediate tuffs and tuff breccias (Blackburn and Hinz 1996) and was available for staking as of September 2006.

10. Mennin Lake–West Hawk Lake Mo, ±Ag, ±Pb, ±Cr, ±Cd, ±Cs, ±Co, ±V, ±Th, ±Cu ±Zn, ±W, ±Li, ±Ta, ±Fe, REEs, ±Be

Sites: 175, 266, 382, 429, 476-478, 526-527, 529, 532-534, 645-646, 657, 927, 1080

This broad anomalous area lies at the margin of the Revell batholith and extends from Mennin Lake in the north to the northern tip of West Hawk Lake. Eighteen sites make up this extensive area, all of which yielded elevated to anomalous Mo. Site 526 located on Oldberg Lake returned the highest value of Mo (20.65 ppm) from this area as well as highly anomalous Ag (0.27 ppm). Highly anomalous (>99th percentile) values of Mo were also returned from Sites 175, 657, 927 and 1080 (19.70, 16.89, 17.36, 19.13 ppm, respectively).

The Oldberg Lake Mo occurrence located on the southeast shore of Oldberg Lake and in the vicinity of Site 526 consists of a shaft sunk on molybdenite-bearing quartz veins (Parker 1989). A second Mo occurrence is located north of this area along the western shore of Mennin Lake (Kresz 1987). This area is underlain by granitic rocks of the Revell batholith.

As of September 2006, the southern half of this area was available for staking.

11. Green Lake–North of Snake Bay (Boyer Lake – Kawashegamuk Lake Area) Cu, ±Cd, ±Zn, ±Pb

Sites: 616, 867-868, 1032-1034, 1071, 1073-1074, 1076

This anomaly covers 2 separate areas. The first area consisting of 4 sites located on Kenny and Green lakes is primarily anomalous in Cu. Three sites (Sites 1032, 1033 and 1071) located on Green Lake returned highly anomalous Cu values; 104.42 ppm, 146.50 ppm and 138.28 ppm, respectively. Site 1033 also returned anomalous Cd (0.83 ppm) and elevated Zn levels (104 ppm). Site 1034, located on Kenny Lake returned anomalous Cu (97.13) and elevated Pb (9.0 ppm).

The remaining sites in this anomalous area are located east of Kenny and Green lakes between Snake Bay and Aiabewatik Lakes. All 6 sites yielded elevated to anomalous Cu values ranging from 90.47 ppm

(Site 868) to 166.74 ppm (Site 616), the 3rd highest Cu value of the survey area. In addition, Cd levels were elevated at Sites 616, 867 and 1076 and anomalous at Site 1074 (0.76 ppm). Site 1074 also yielded anomalous Zn (112 ppm).

Blackburn (1982b) mapped the underlying area as mafic metavolcanic rocks intruded locally by mafic and ultramafic intrusive rocks. The Kenny Lake–Gabbro Lake fault (also known as the Mosher Bay–Washeibemaga Lake fault) is a major fault in this area and is marked by intense shearing in rocks along the contact between the Boyer Lake group to the north and the Stormy Lake group to the south. Blackburn (1982a) notes that all known base metal sulphide occurrences in the area are associated with mafic rather than felsic rocks, be they volcanic or intrusive.

As of September 2006, this area was available for staking.

12. Walmsley Lake–Boyer Lake (Boyer Lake Area) Ag, As, ±Au, ±Cu, ±Cd, ±Sb, ±Co

Sites: 662-664, 666-667, 768

This anomalous area extends from Site 667, located west of Walmsley Lake, to Site 662 located southeast of Boyer Lake. All 6 sites returned elevated to anomalous Ag values ranging from 0.25 ppm at Sites 666 and 768 to 0.97 ppm at Site 662, the highest Ag value in the survey area. Gold was recovered from 2 sites; Site 667 (8 ppb) and Site 662 (13 ppb). Sites 662 and 768 also yielded anomalous Cu values (98.73 ppm and 118.54 ppm, respectively).

Although Au was only recovered from 2 locations in this area, the remaining sites warrant further investigation as they yielded elevated to anomalous values of gold pathfinders (e.g., Sb, As, Cu).

In this area a large mafic to ultramafic body known as the Boyer Lake body intrudes a thick sequence of subalkalic mafic metavolcanics. Lithologic variation of the Boyer Lake body is from gabbro to troctolic gabbro to pyroxenitic gabbro and diabasic marginal phases (Blackburn 1982a). A group of occurrences (py, cp, po) at Boyer Lake, which lie at the southern margin of this body, are associated with a differentiated gabbroic sill (Blackburn 1982a).

As of September 2006, this area was available for staking.

Summary and Conclusions

Preliminary interpretation of the lake sediment analytical results for the Upper Manitou Lake area indicates the presence of 12 anomalous areas. Most of the anomalous areas are multi-element, multi-site anomalies, many of which are considered significant targets for further mineral exploration activities. Some single-element and/or single-site anomalies may also warrant further investigation, particularly if they are located in regions of favourable geology or known mineral occurrences. The treatment of available data in this report is not considered to be exhaustive and the reader is encouraged to carry out further investigations.

Acknowledgments

The author would like to thank Richard Dyer for his guidance and direction in the writing of this report. Thanks are also extended to field assistants Jonathon Munn, Mathew Munn and Stephen Grant.

References

Barnett, P.J., Henry, A.P. and Babuin, D. 1991. Quaternary geology of Ontario, east-central sheet; Ontario Geological Survey, Map 2555, scale 1:1 000 000.

Blackburn, C.E. 1979. Geology of the Upper Manitou Lake area, District of Kenora; Ontario Geological Survey, Report 189, 74p.

——— 1980. Precambrian geology, Boyer Lake; Ontario Geological Survey, Map 2437, Scale 1:31 680.

——— 1981. Kenora-Fort Frances, Geological Compilation Series, Kenora and Rainy River districts; Ontario Geological Survey, Map 2443, scale 1:253 440.

——— 1982a. Geology of the Manitou Lakes area, District of Kenora, (stratigraphy and petrochemistry); Ontario Geological Survey Report 223, 61p.

——— 1982b. Precambrian geology, Upper Manitou Lake–Sunshine Lake; Ontario Geological Survey, Map 2476, Scale 1:50 000.

Blackburn, C.E., Johns, G.W., Ayer, J. and Davis, D.W. 1991. Wabigoon Subprovince; *in* Geology of Ontario, Ontario Geological Survey, Special Volume 4, Part 1, p.303-381.

Blackburn, C.E. and Hinz, P. 1996. Gold and base metal potential of the northwest part of the Raleigh Lake greenstone belt, northwestern Ontario–Kenora Resident Geologist's District; *in* Summary of Field Work and Other Activities, Ontario Geological Survey, Miscellaneous Paper 166, p.113-115.

Dyer, R.D. 1998. Garden Lake–Obonga Lake high density regional lake sediment and water survey, northwestern Ontario; *in* Summary of Field Work and Other Activities 1998, Ontario Geological Survey, Miscellaneous Paper 169, p.262-266.

Dyer, R.D. 2005. Gold dispersion and geochemical response in surficial media: Implications for data interpretation and exploration; *in* Summary of Field Work and Other Activities 2005; Ontario Geological Survey, Open File Report 6172, p.24-1 to 24-8.

Hornbrook, E.H. and Friske, P.W. 1989. National geochemical reconnaissance lake sediment and water data, northwestern Ontario (52F); Geological Survey of Canada, Open File 1958.

Kresz, D.U. 1987. Stratigraphic map of the Kawashegamuk Lake area, with sample locations, District of Kenora; Ontario Geological Survey, Preliminary Map P.3100, scale 1:31 680.

Lichtblau, A., Hinz, P., Ravnaas, C., Storey, C.C., Kosloski, L., Raoul, A. and Gula, R. 2005. Report of Activities 2004, Resident Geologist Program, Red Lake Regional Resident Geologist Report: Red Lake and Kenora Districts; Ontario Geological Survey, Open File Report 6146, 97p.

Lynch, J. 1990. Provisional elemental values for eight new geochemical lake sediment and stream sediment reference materials LKSD-1, LKSD-2, LKSD-3, LKSD-4, STSD-1, STSD-2, STSD-3 and STSD-4· Geostandards Newsletter, v.14, no.1, April 1990, p.153-167.

Minning, G.V., Cowan, D.R., Sharpe, D.R., and Warman, T.A. 1994. Quaternary geology and drift composition, Lake of the Woods region, northwestern Ontario; Geological Survey of Canada, Memoir 436, 239p.

Ontario Geological Survey 1986. Meggisi Lake Area, District of Kenora; Ontario Geological Survey, Geological Data Inventory Folio 314; compiled by the staff of the Resident Geologist's Office, Kenora.

———1991. Bedrock geology of Ontario, west-central sheet; Ontario Geological Survey, Map 2542, scale 1:1 000 000.

——— 2002. Mineral deposit inventory, version 2 (MDI2); Ontario Geological Survey.

Parker, J.R. 1989. Geology, gold mineralization and property visits in the area investigated by the Dryden–Ignace economic geologist, 1984–1987; Ontario Geological Survey, Open File Report 5723, 306p.

Roed, M.A. 1980. Gold Rock area (NTS 52F/SE), Districts of Kenora and Rainy River; Ontario Geological Survey, Northern Ontario Engineering Geology Terrain Study 38, 14p. Accompanied by Map 5061, scale 1:100 000.

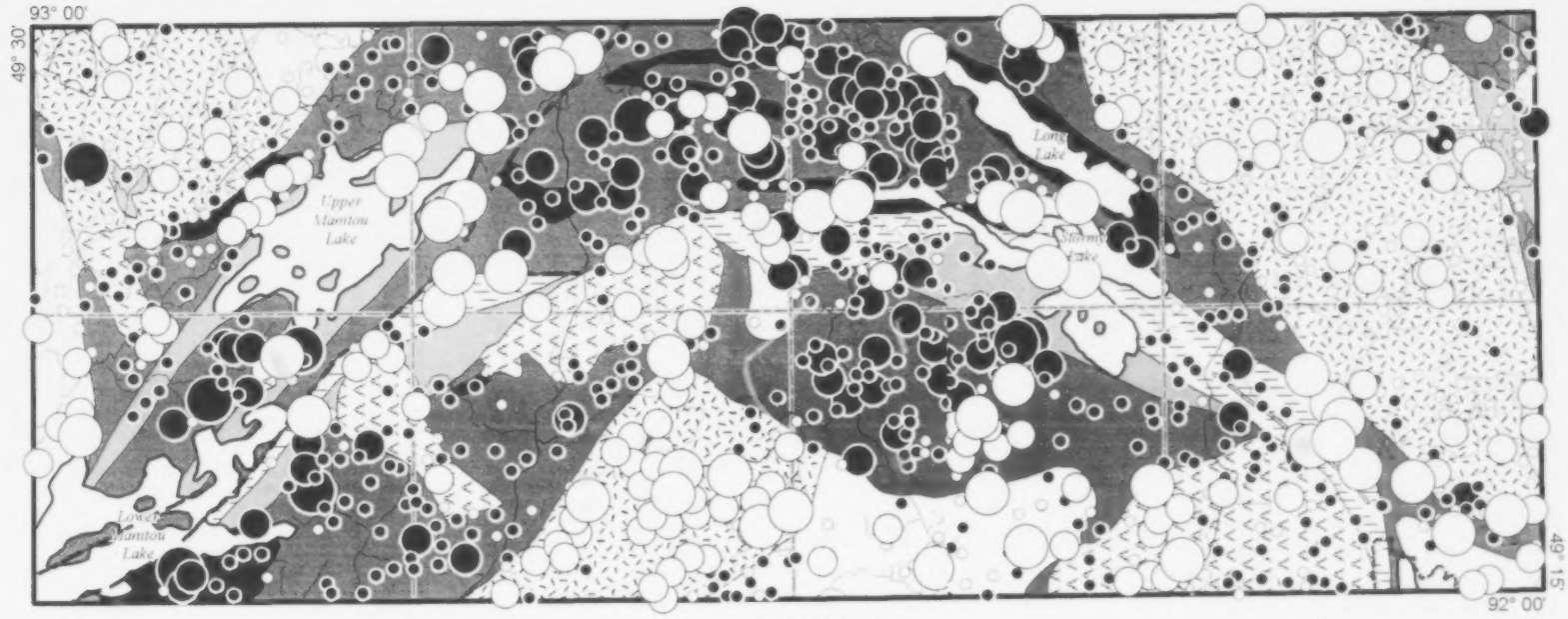
Russell, D.F. 2004. Sturgeon Lake–Wabigoon Lake area high density regional lake sediment and water geochemical survey, northwestern Ontario; Ontario Geological Survey, Open File Report 6125, 94p.

Zoltai, S.C. 1961. Glacial history of part of northwestern Ontario; Geological Association of Canada, Proceedings, v.13, p.61-83.

This page left blank intentionally.

Appendix 1

Proportional Dot Maps of
Loss-on-Ignition, Lake Depth, pH and Conductivity



Loss-on-ignition
LOI (%)
Grav.

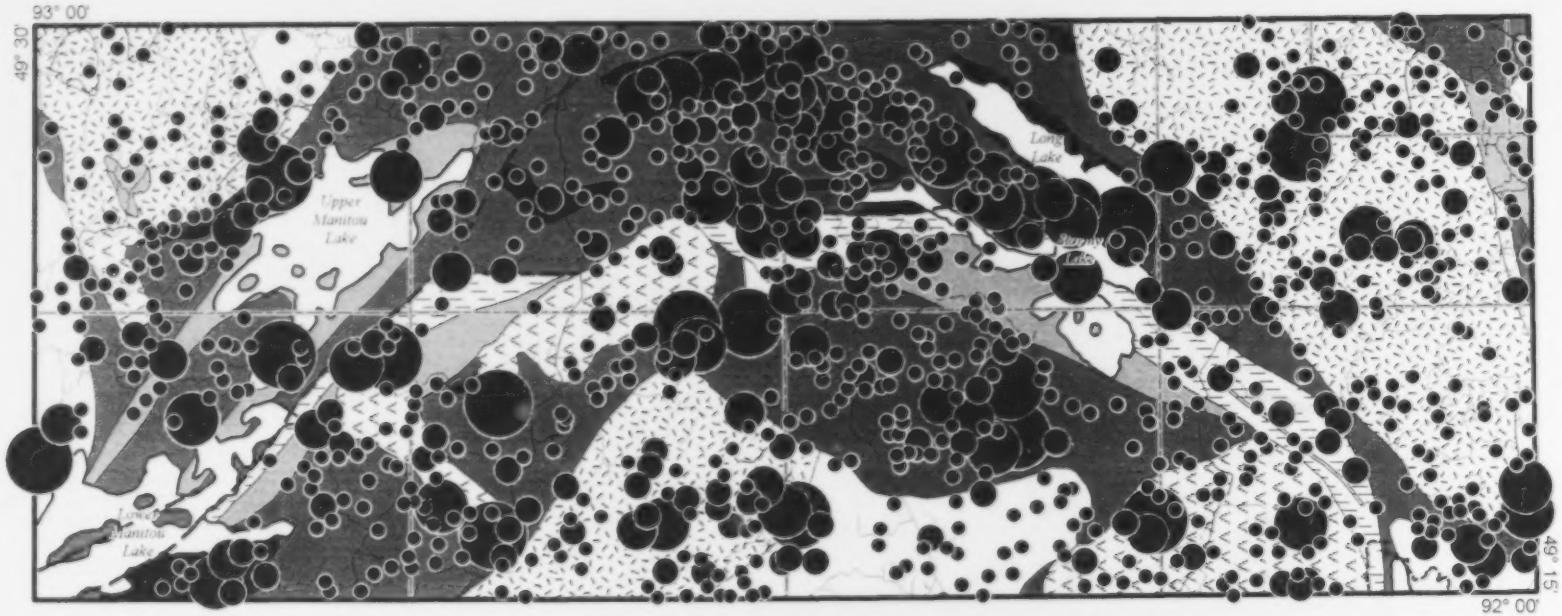
- <20.0
- 20.0 - 31.0
- 31.1 - 43.0
- 43.1 - 66.0
- 66.1 - 75.0
- >75.0

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedmentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Lake Depth

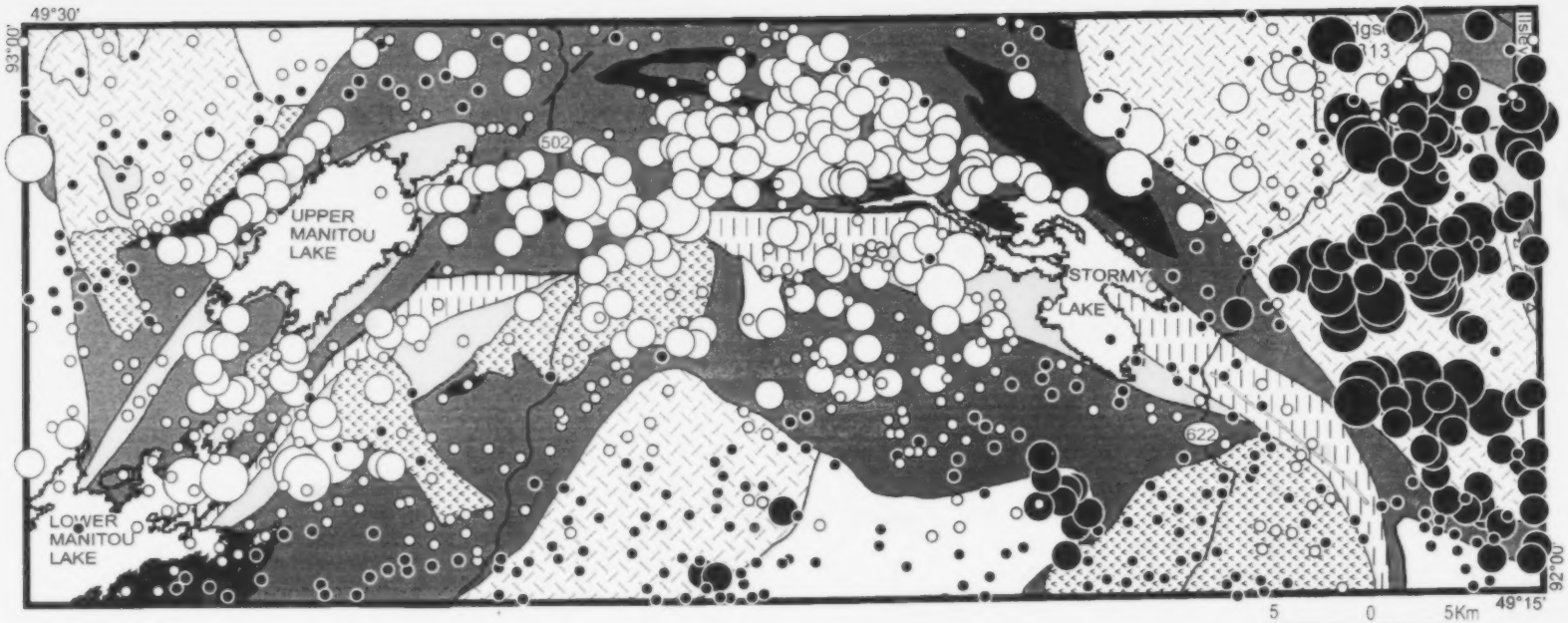
Approx %'ile	Depth (m)
<75	<10
75 - 90	10 - 17
91 - 95	18 - 21
96 - 98	22 - 26
>98	>26

0 2.5 5 10
Kilometres

N

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults



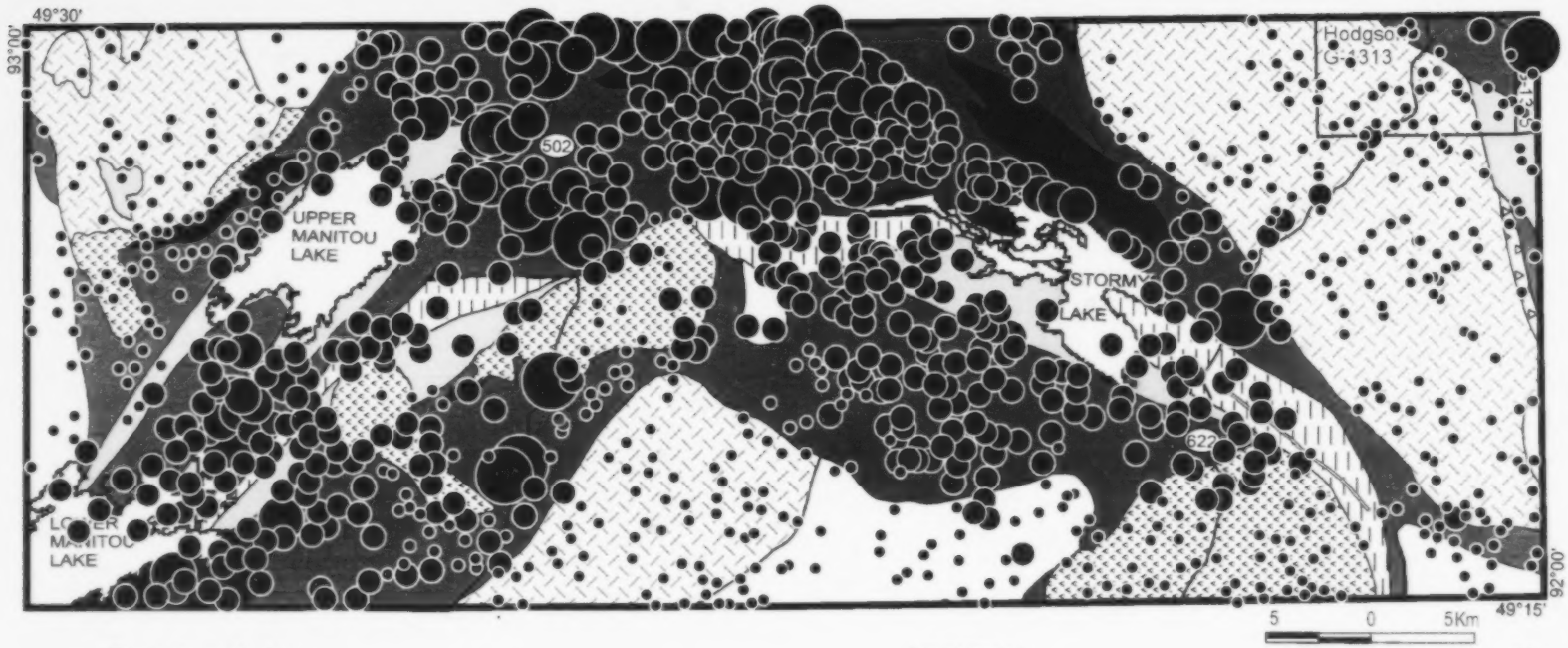
pH of Lake Water

- <5.8
- 5.8-6.4
- 6.5-7.1
- 7.2-7.8
- 7.9-8.5
- >8.5

ARCHEAN

- Massive granodiorite to granite
- Diorite-monzonite-granodiorite
- Muscovite bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic intrusive rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to intermediate metavolcanic rocks
- Faults

N



Conductivity

Approx %'ile		Cond. (µs/cm)
<50	•	<27
50-90	●	27-79
91-95	●	79-91
96-98	●	91-108
>98	●	>108

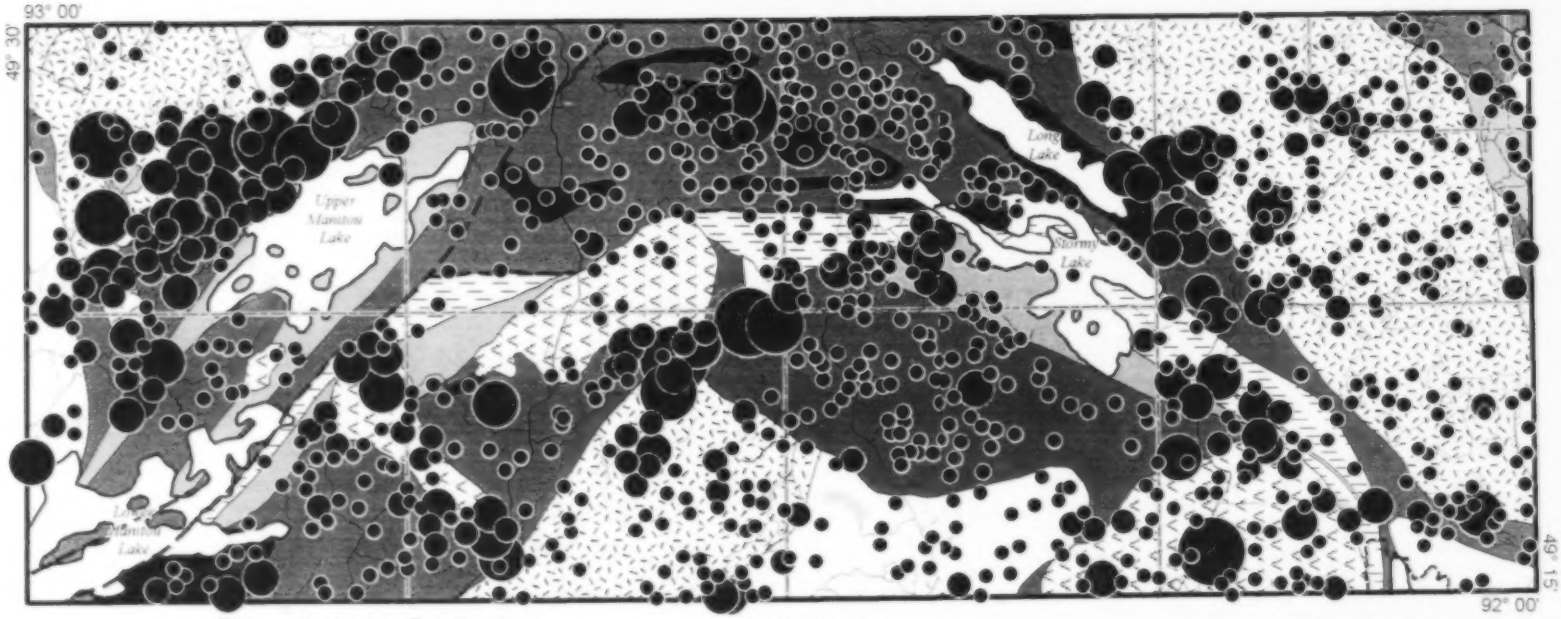
ARCHEAN

- Massive granodiorite to granite
- Diorite-monzonite-granodiorite
- Muscovite bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic intrusive rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to intermediate metavolcanic rocks
- Faults

This page left blank intentionally.

Appendix 2

Proportional Dot Maps of Lake Sediment Geochemistry for Ag, As, Au, Be, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Li, Mn, Mo, Ni, Pb, REEs, Sb, Ta, Th, U, V, W, Zn and Zr



Silver in Lake Sediment

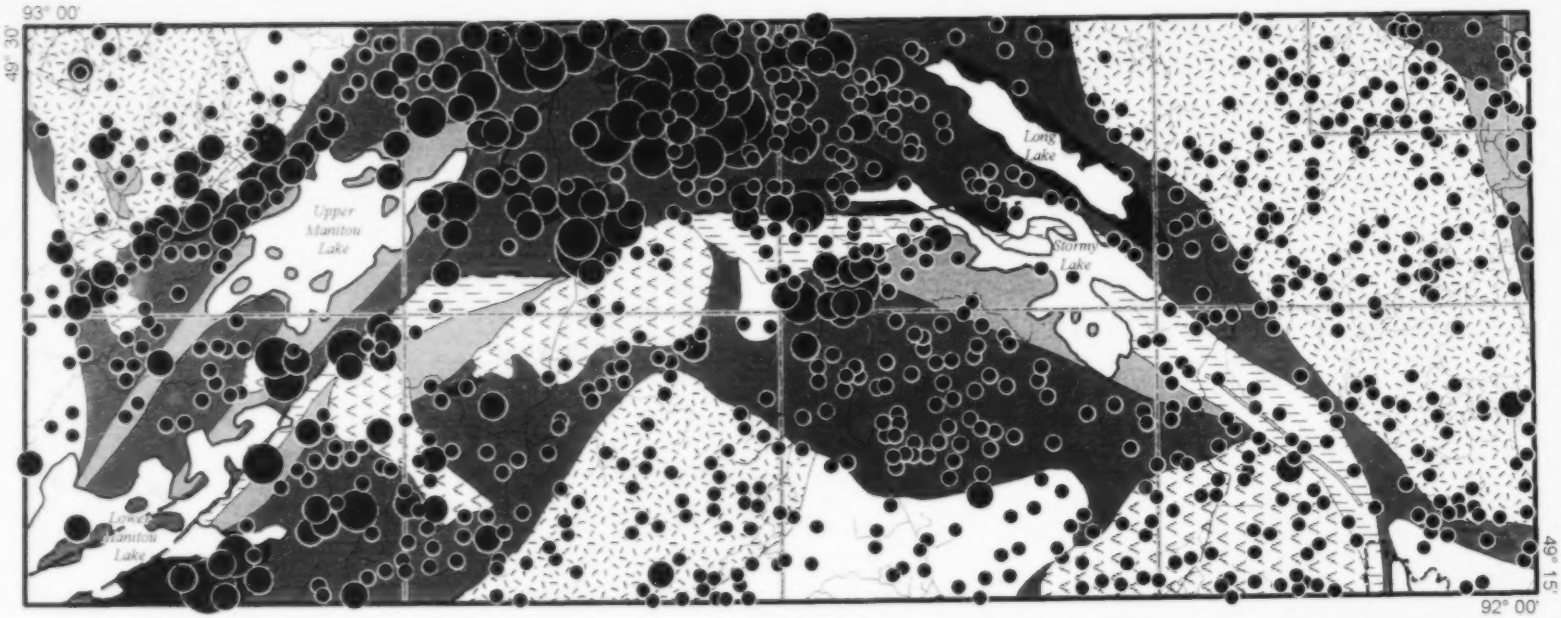
Approx %'ile	Ag (ppm) ICP-MS
<75	<0.16
75 - 90	0.16 - 0.21
91 - 95	0.22 - 0.26
96 - 98	0.27 - 0.34
98 - 99	0.35 - 0.40
>99	>0.40

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedmentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Arsenic in Lake Sediment

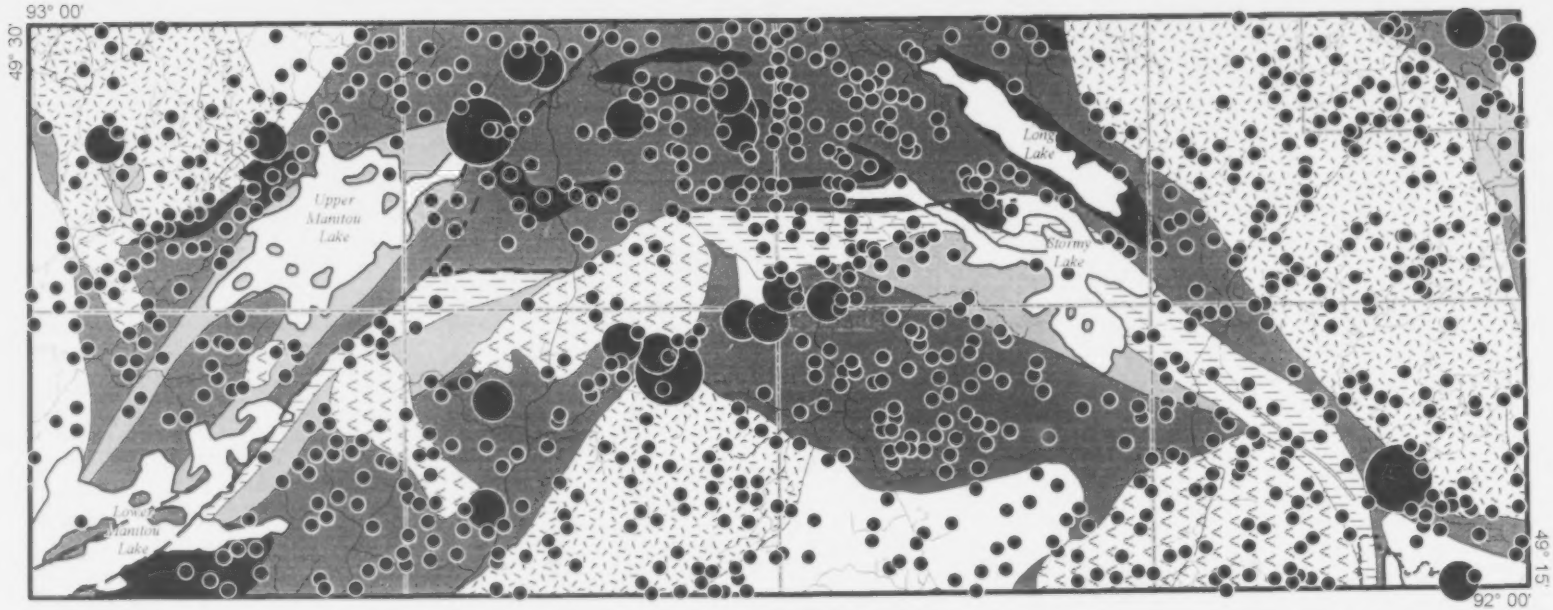
Approx %'ile	As (ppm) INAA
<75	<4.7
75 - 90	4.7 - 7.7
91 - 95	7.8 - 14.0
96 - 98	14.1 - 37.0
>98	>37.0

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Gold in Lake Sediment

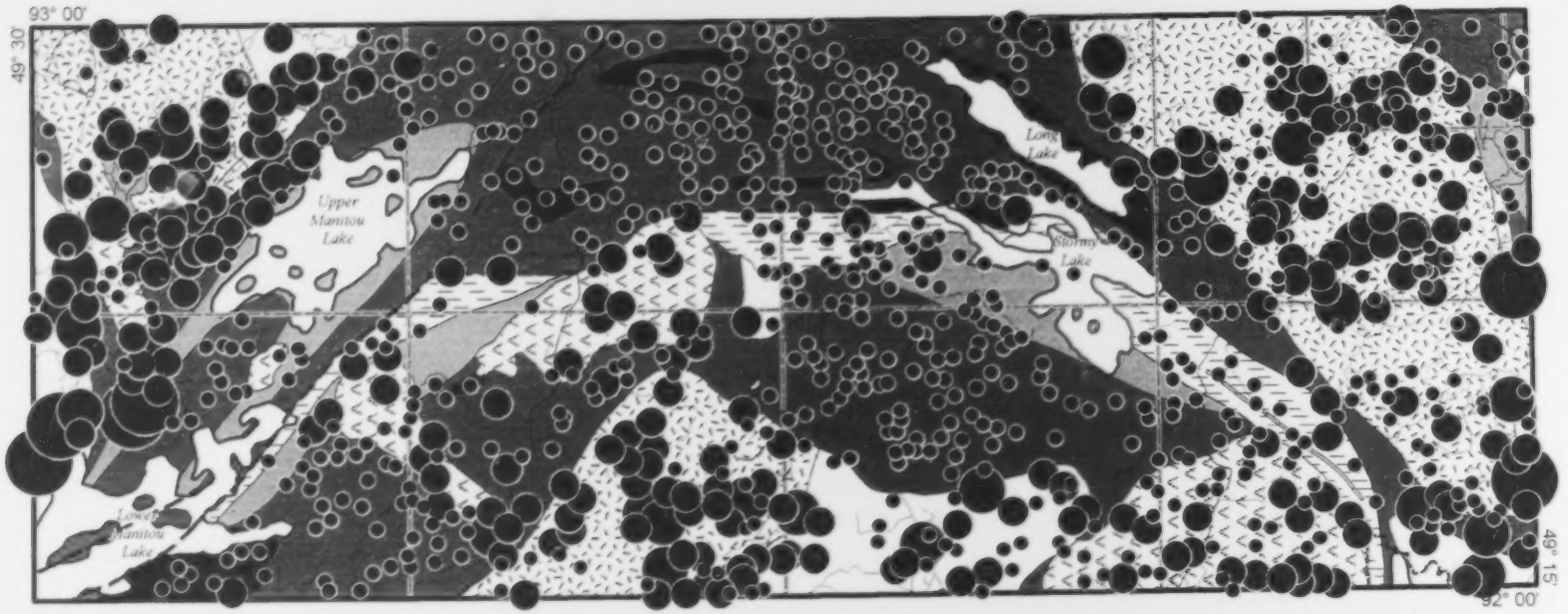
Approx %'ile	Au (ppb) INAA
<95	<5
95 - 99	5 - 13
>99	>13

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Beryllium in Lake Sediment

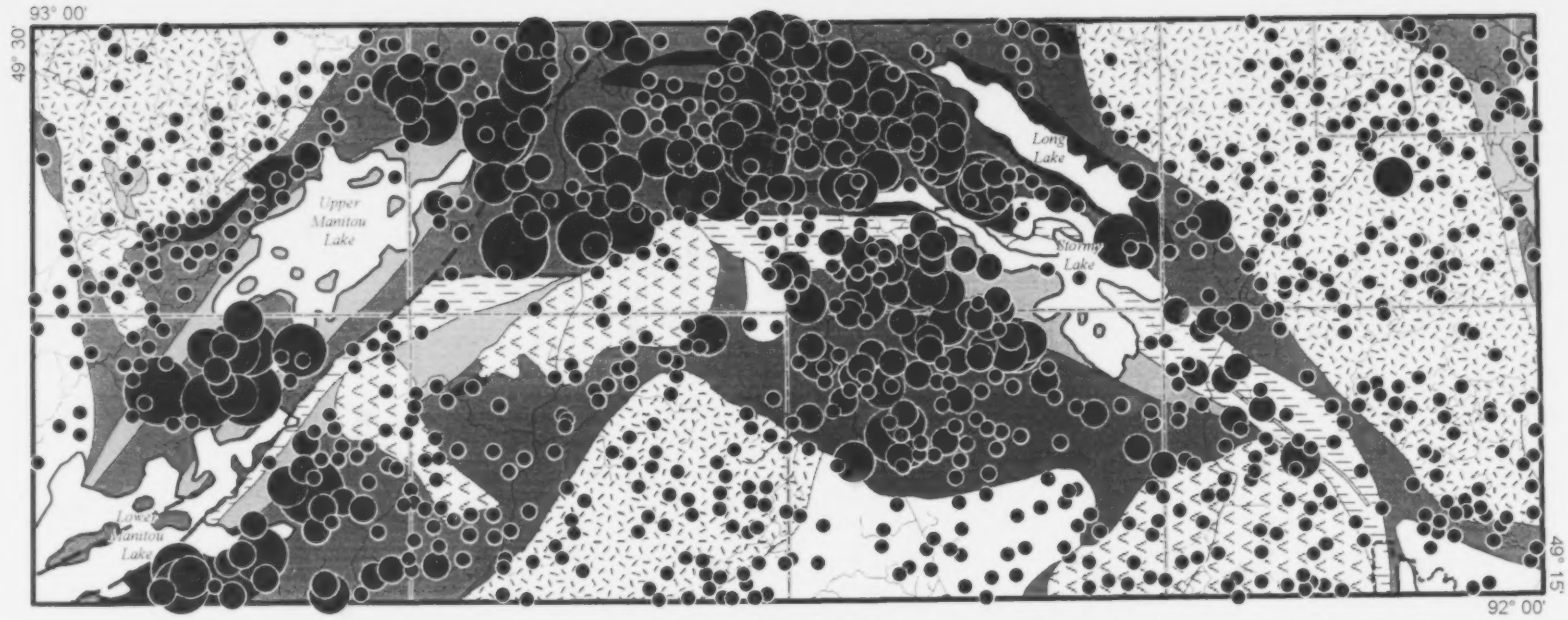
Approx %'ile		Be (ppm) ICP-MS
<75	•	<0.50
75 - 95	●	0.50 - 0.80
96 - 99	●	0.80 - 1.00
>99	●	>1.00

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Calcium in Lake Sediment

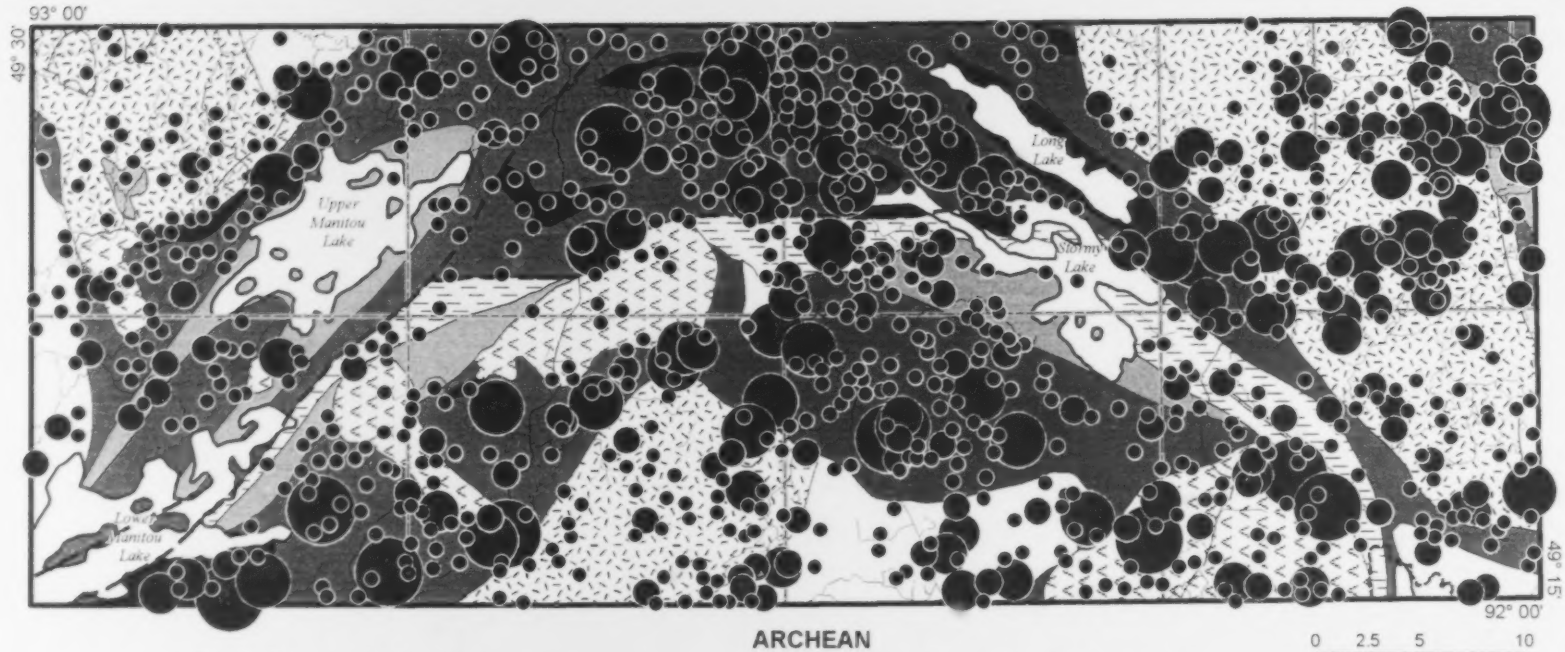
Approx %'ile	Ca (ppm) ICP-OES
<75	<10714
75 - 90	10714 - 13031
91 - 95	13032 - 14532
96 - 98	14533 - 15968
>98	>15968

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Cadmium in Lake Sediment

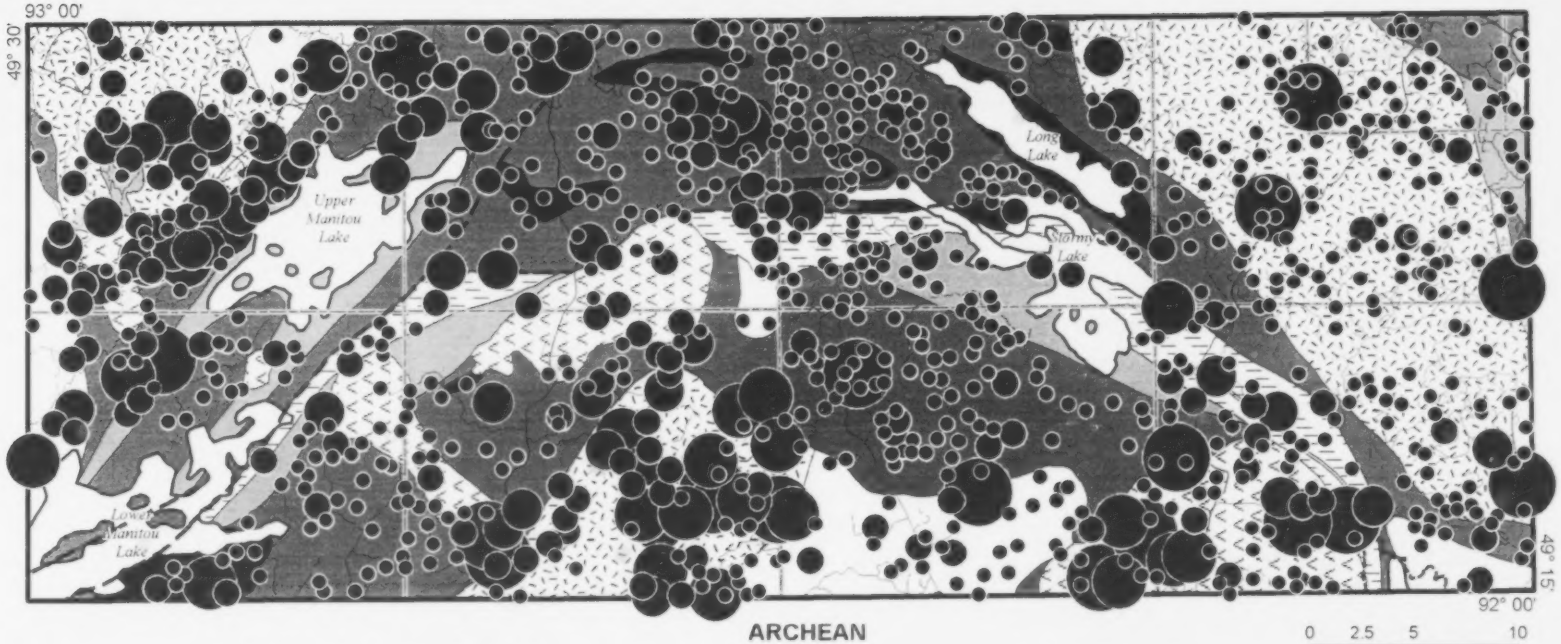
Approx %'ile	Cd (ppm) ICP-MS
<75	<0.54
75 - 90	0.54 - 0.63
91 - 95	0.64 - 0.71
96 - 98	0.72 - 0.77
>98	>0.77

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Cobalt in Lake Sediment

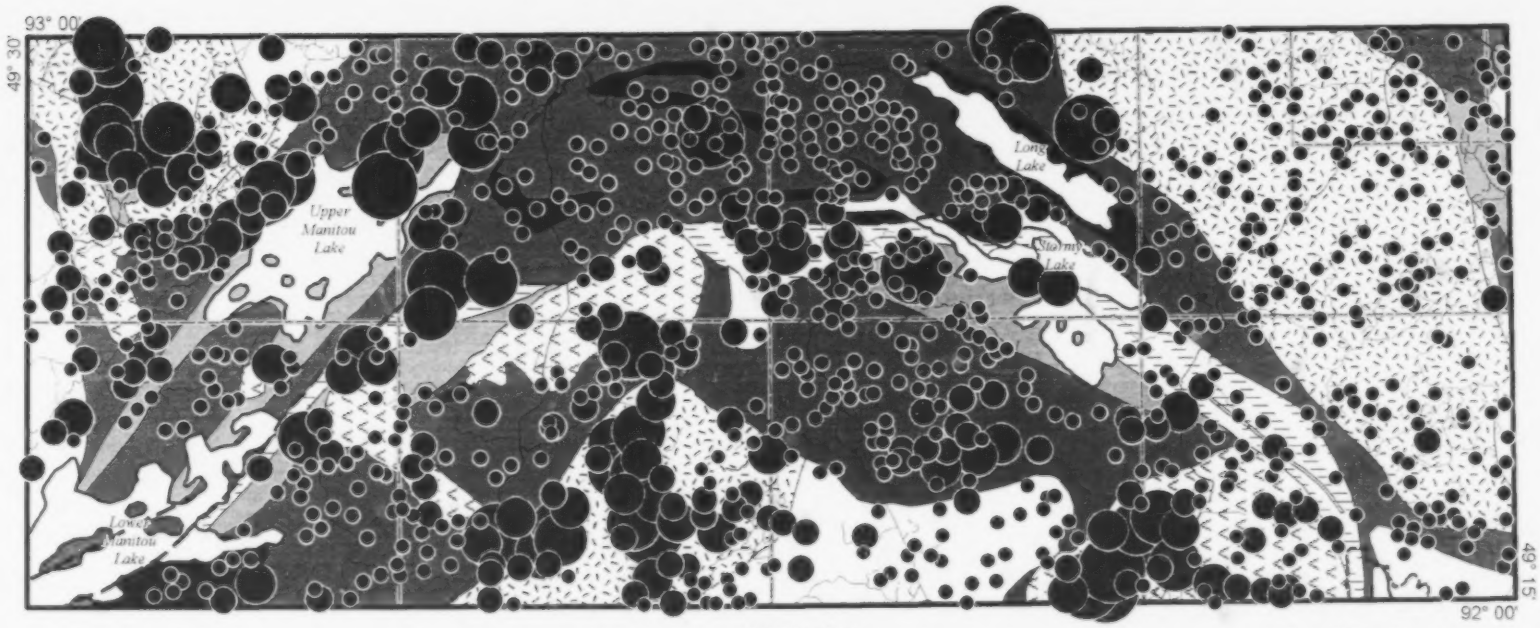
Approx %'ile	Co (ppm) ICP-MS
<75	<11.48
75 - 90	11.48 - 15.18
91 - 95	15.19 - 18.22
96 - 98	18.23 - 25.32
>98	>25.32

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Chromium in Lake Sediment

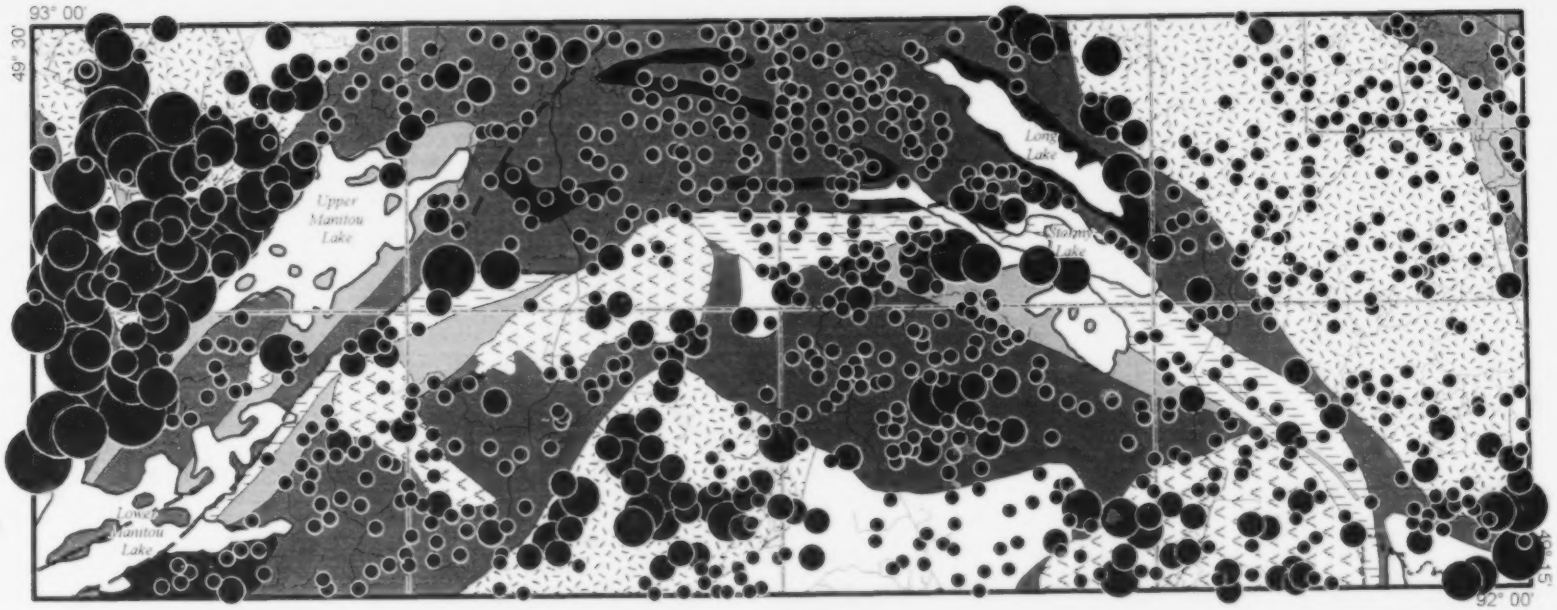
Approx %'ile	Cr (ppm) ICP-MS
<75	<33.3
75 - 90	33.3 - 43.7
91 - 95	43.8 - 48.7
96 - 98	48.8 - 53.3
>98	>53.3

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Cesium in Lake Sediment

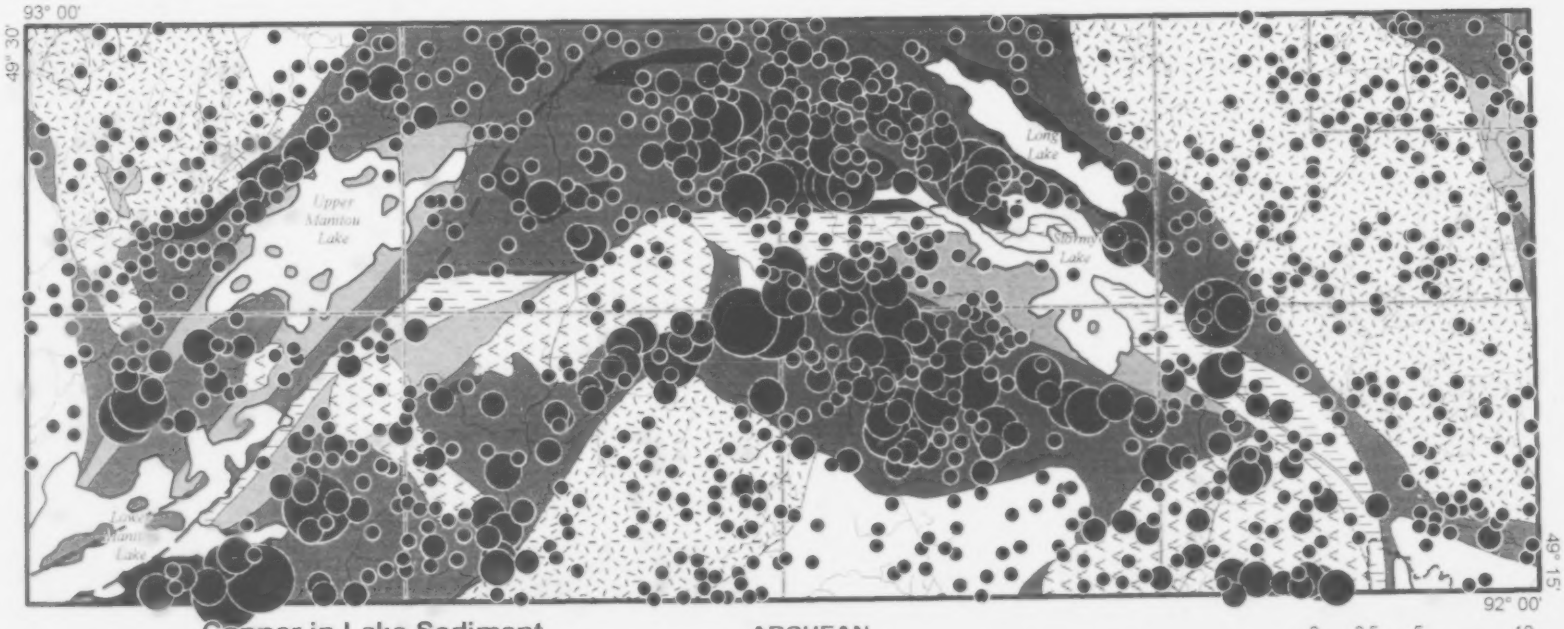
Approx %'ile	Cs (ppm) ICP-MS
<75	<1.40
75 - 90	1.40 - 1.97
91 - 95	1.98 - 2.38
96 - 98	2.39 - 3.00
>98	>3.00

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Copper in Lake Sediment

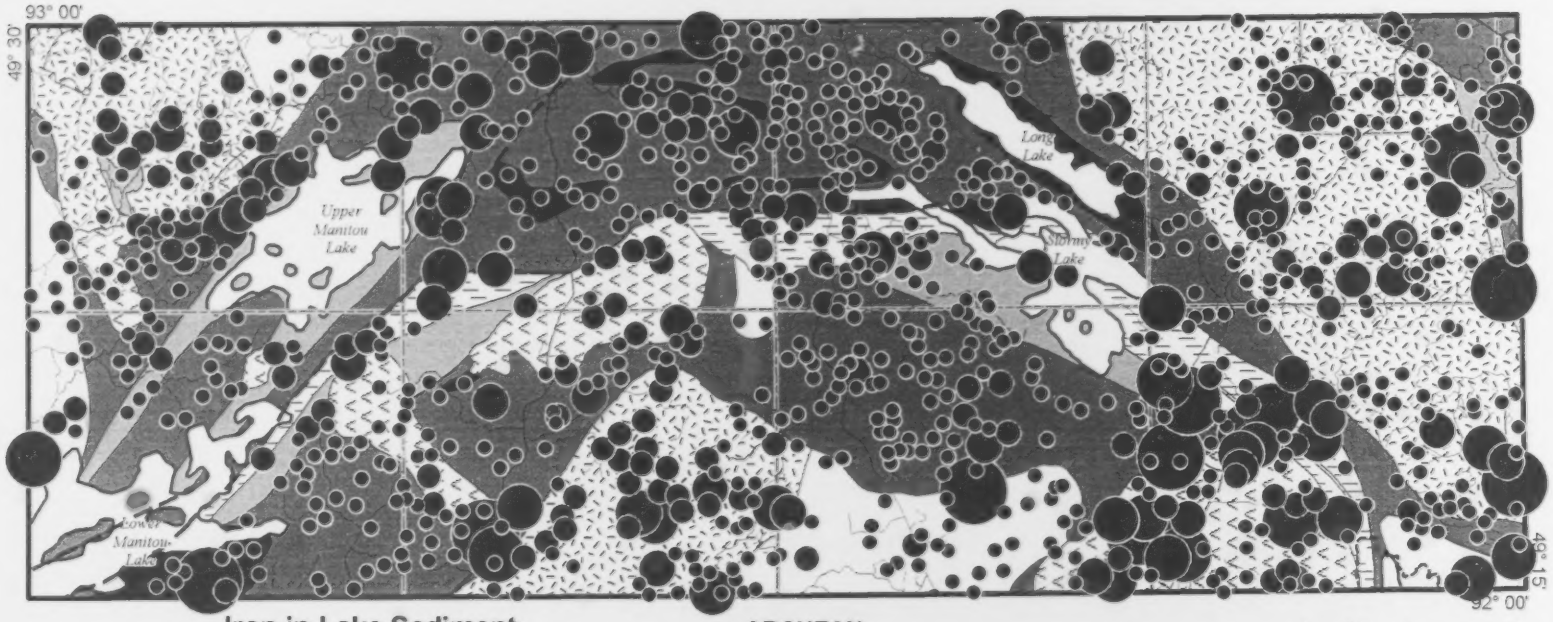
Approx %'ile	Cu (ppm) ICP-MS
<75	<59.1
75 - 90	59.1 - 78.8
91 - 95	78.9 - 93.8
96 - 98	93.9 - 116.6
98 - 99	116.7 - 138.5
>99	>138.5

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Iron in Lake Sediment

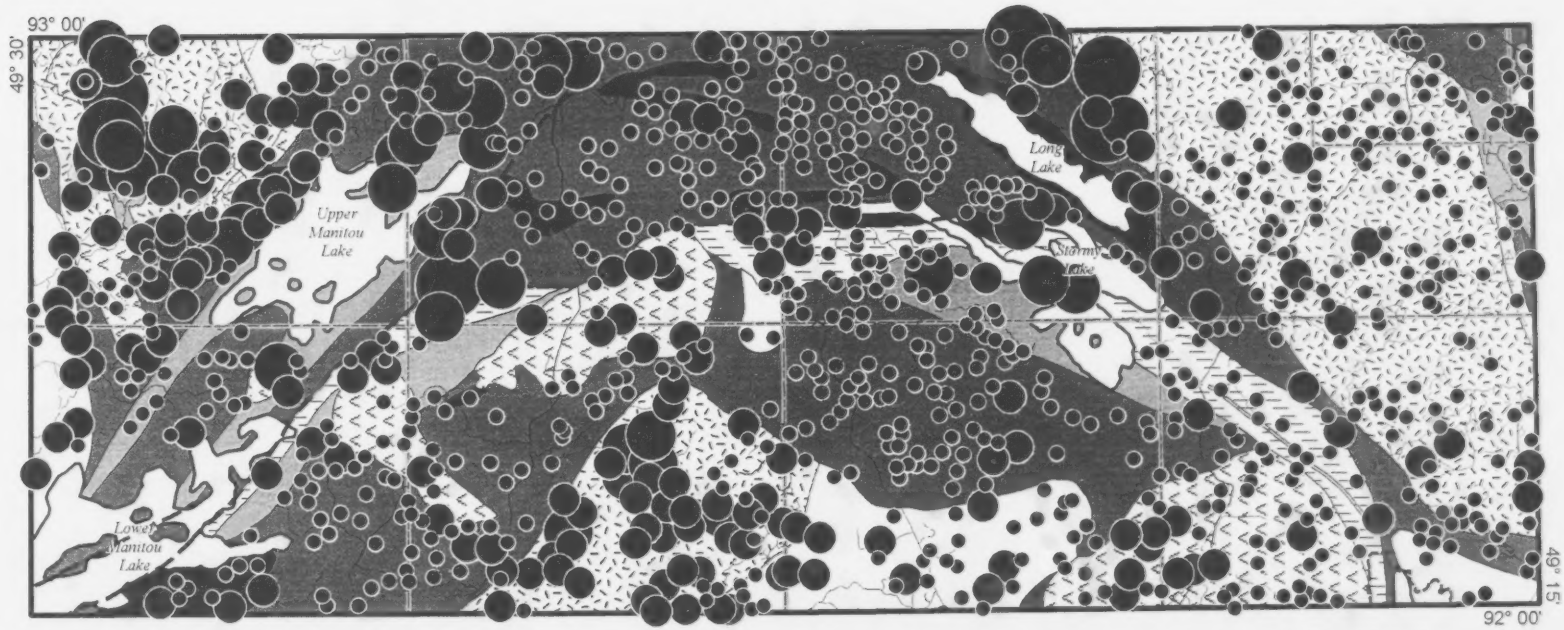
Approx %'ile	Fe (ppm) ICP-OES
<75	<21779
75 - 90	21779 - 32242
91 - 95	32243 - 40271
96 - 98	40272 - 53956
98 - 99	53957 - 70061
>99	>70061

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Gallium in Lake Sediment

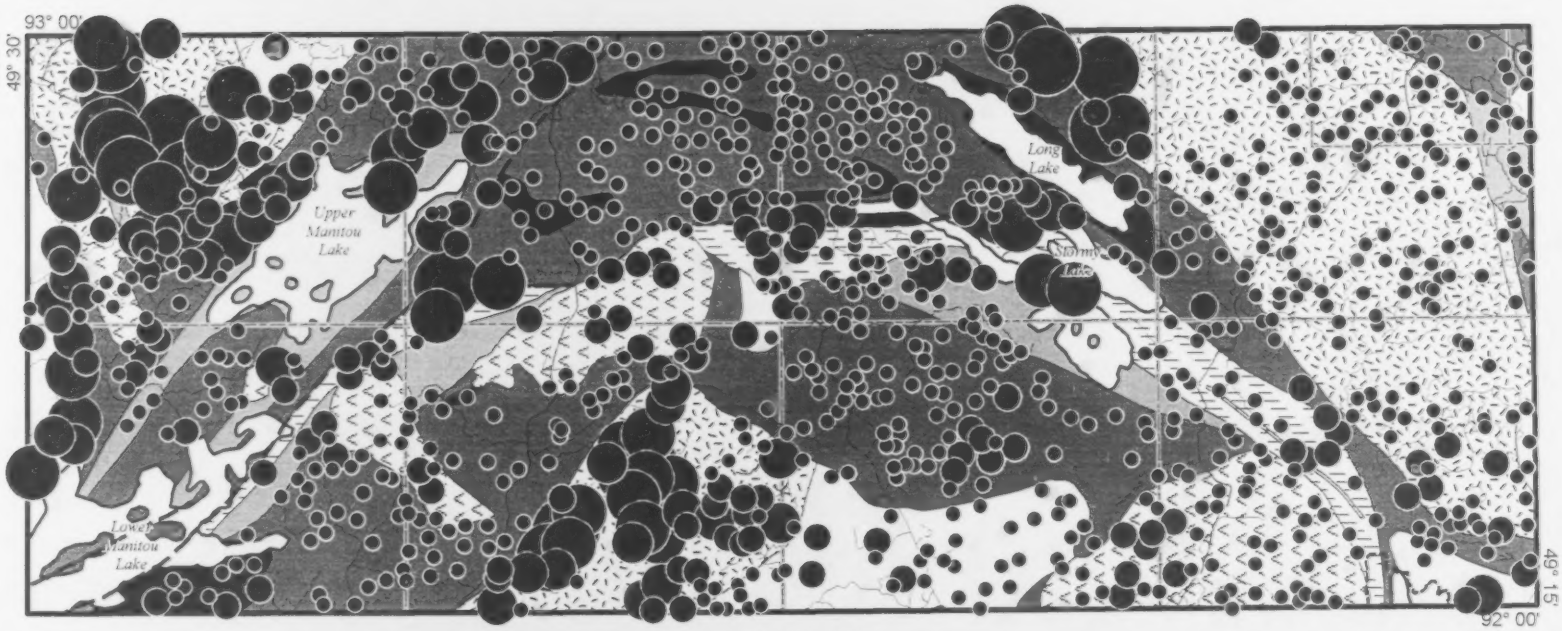
Approx %'ile	Ga (ppm) ICP-MS
<75	<3.53
75 - 95	3.53 - 5.62
96 - 99	5.63 - 6.89
>99	>6.89

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Lithium in Lake Sediment

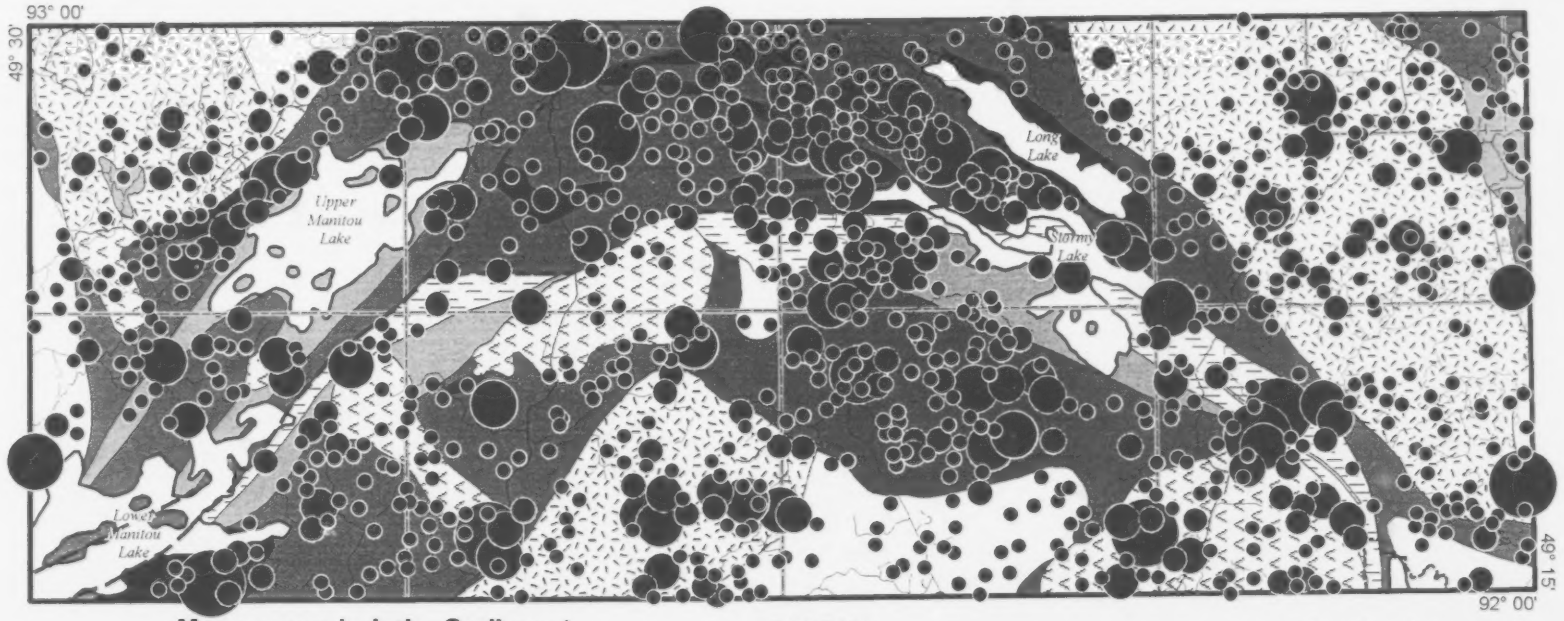
Approx %'ile	Li (ppm) ICP-MS
<75	<9.8
75 - 90	9.8 - 15.9
91 - 95	16.0 - 19.1
96 - 98	19.2 - 23.4
>98	>23.4

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Manganese in Lake Sediment

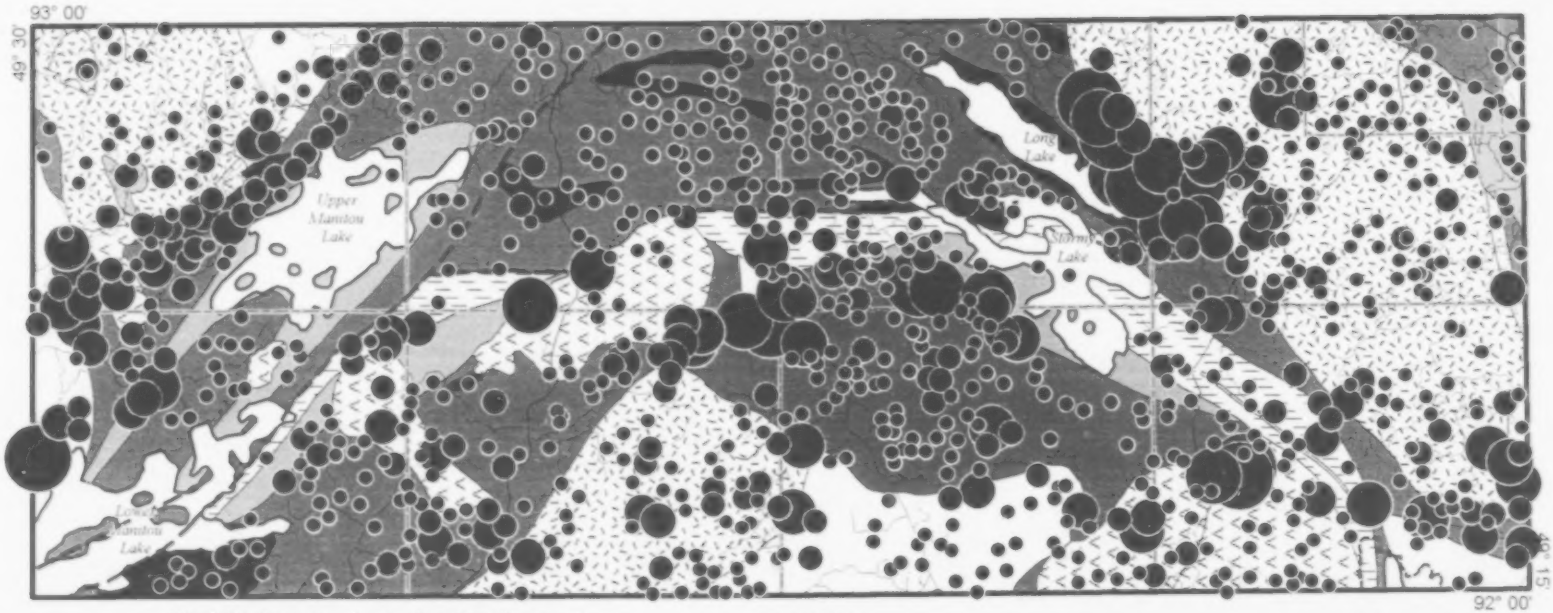
Approx %'ile	Mn (ppm) ICP-OES
<75	<435
75 - 90	435 - 708
91 - 95	709 - 1102
96 - 98	1103 - 1900
98 - 99	1901 - 2960
>99	>2960

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Molybdenum in Lake Sediment

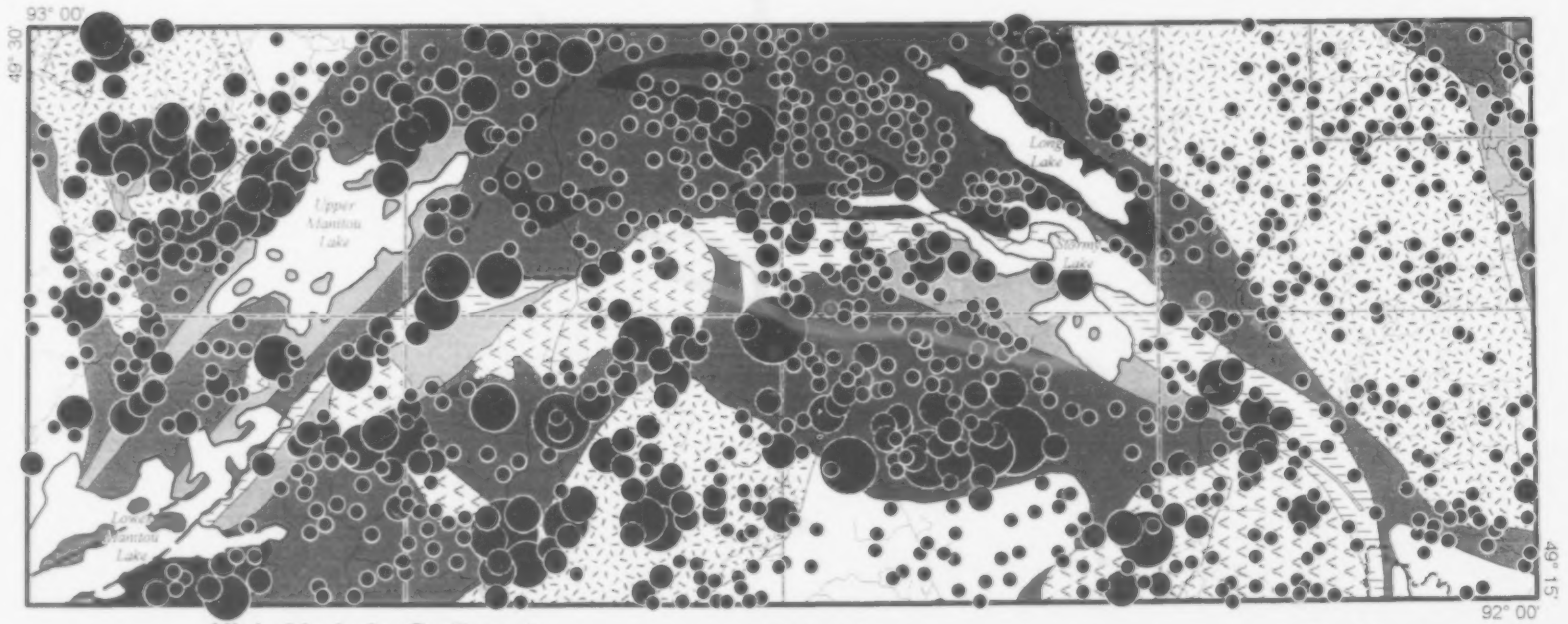
Approx %'ile	Mo (ppm) ICP-MS
<75	<2.42
75 - 90	2.42 - 3.73
91 - 95	3.74 - 5.33
96 - 98	5.34 - 9.26
98 - 99	9.27 - 16.33
>99	>16.33

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Nickel in Lake Sediment

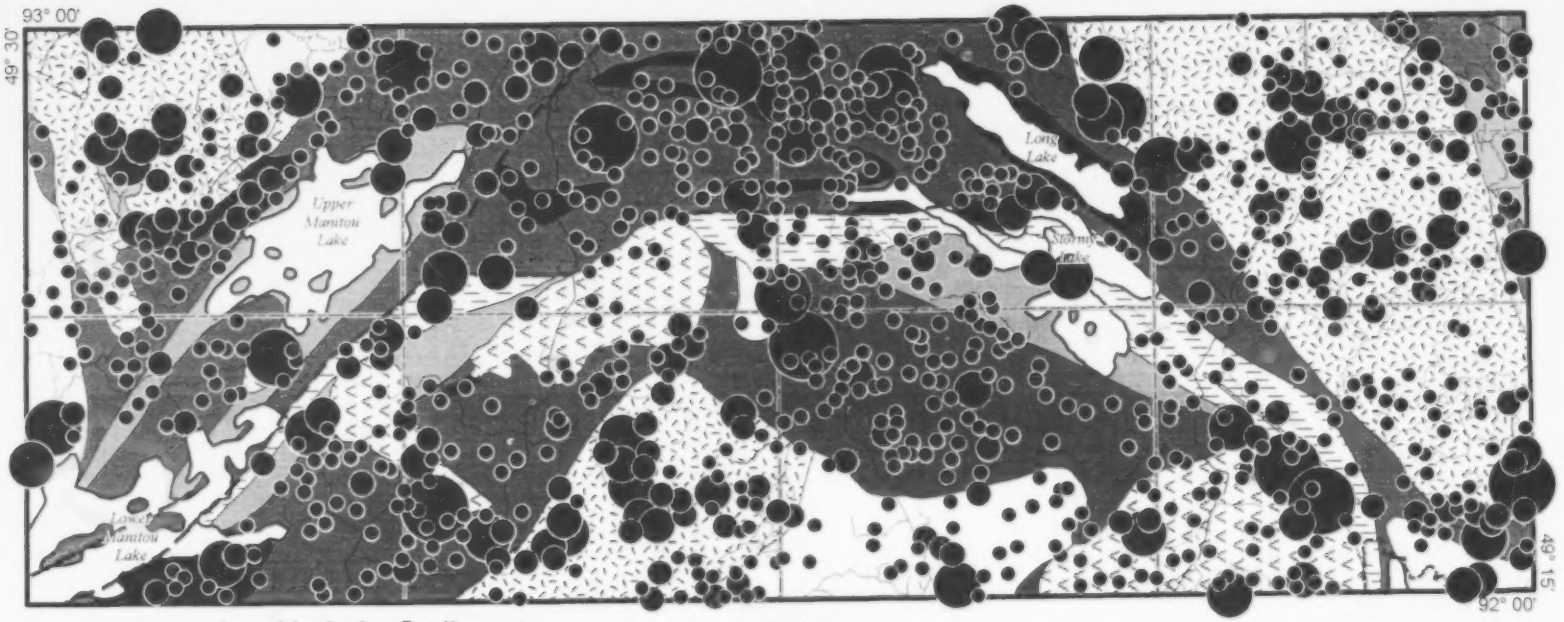
Approx %'ile	Ni (ppm) ICP-OES
<75	<32
75 - 90	32 - 41
91 - 95	41 - 45
96 - 98	45 - 50
98 - 99	50 - 54
>99	>54

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Lead in Lake Sediment

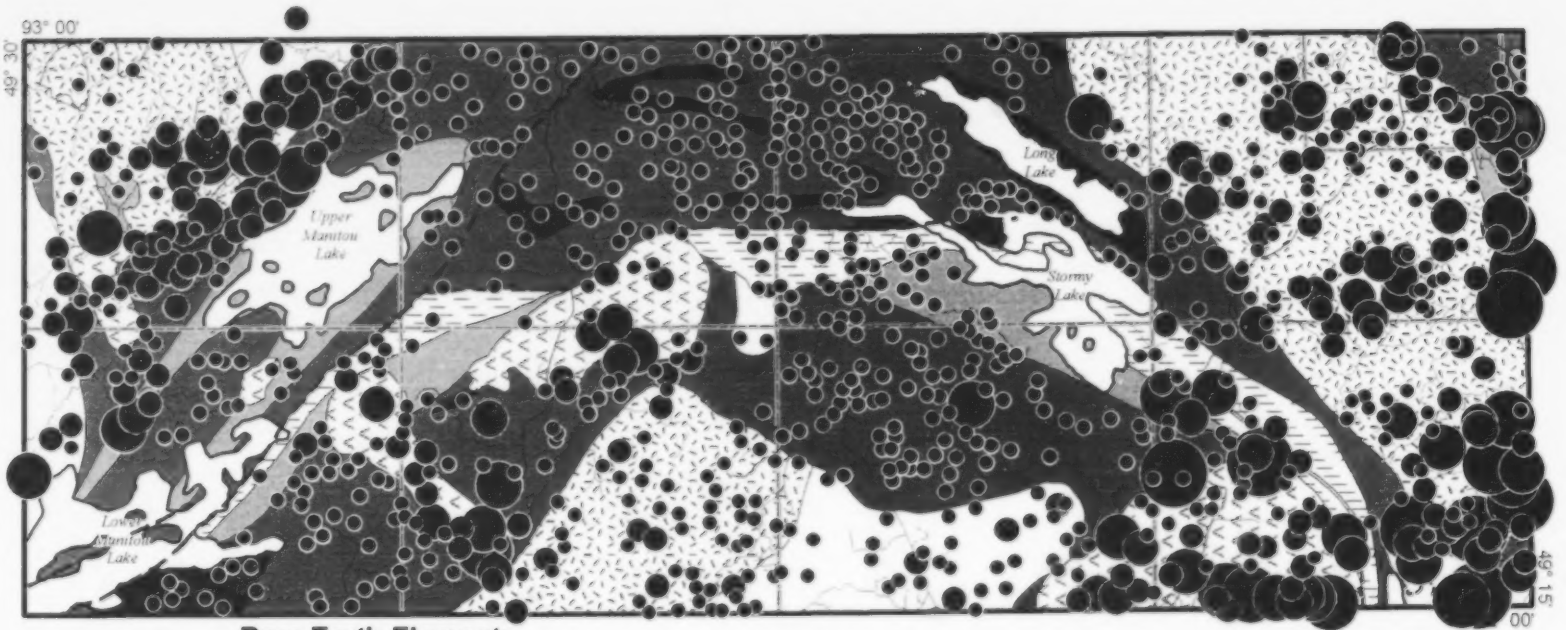
Approx %'ile	Pb (ppm) ICP-MS
<75	<6.70
75 - 90	6.70 - 8.20
91 - 95	8.21 - 9.30
96 - 98	9.31 - 11.30
98 - 99	11.31 - 13.70
>99	>13.70

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Rare Earth Elements in Lake Sediment

Approx %'ile	REEs (ppm) ICP-MS
<75	<65.10
75 - 90	65.10 - 87.00
91 - 95	87.01 - 99.93
96 - 98	99.94 - 125.30
98 - 99	125.31 - 156.13
>99	>156.13

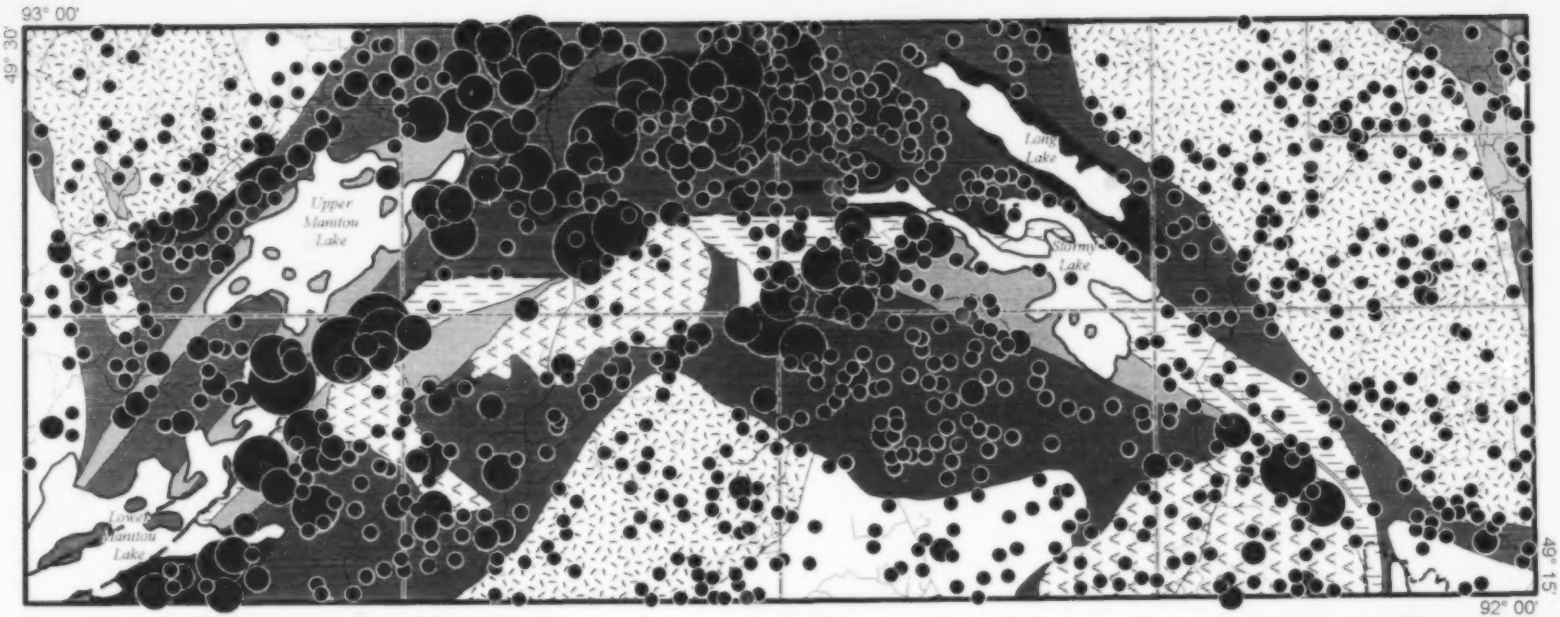
ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N

Note: REEs includes all rare earth elements exept lanthanum and cerium.



Antimony in Lake Sediment

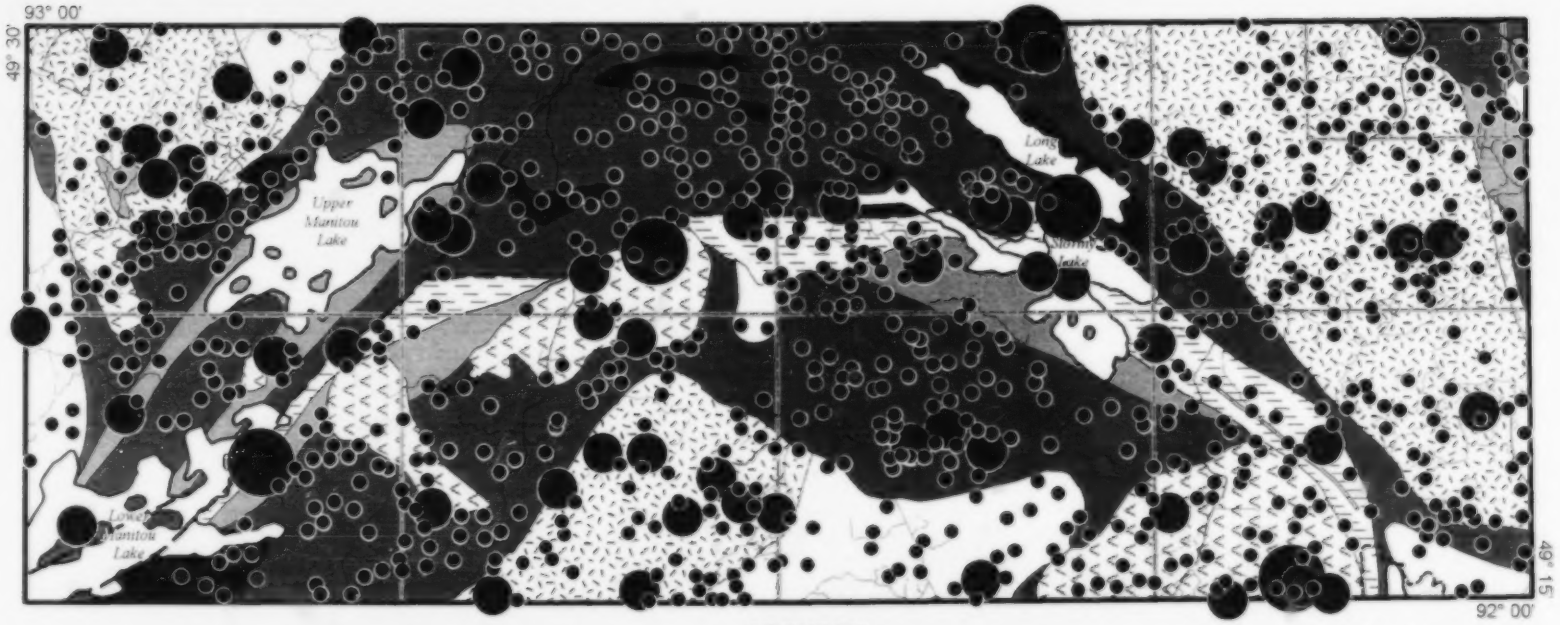
Approx %'ile	Sb (ppm) ICP-MS
<75	<0.16
75 - 90	0.16 - 0.21
91 - 95	0.22 - 0.25
96 - 98	0.26 - 0.34
98 - 99	0.35 - 0.42
>99	>0.42

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Tantalum in Lake Sediment

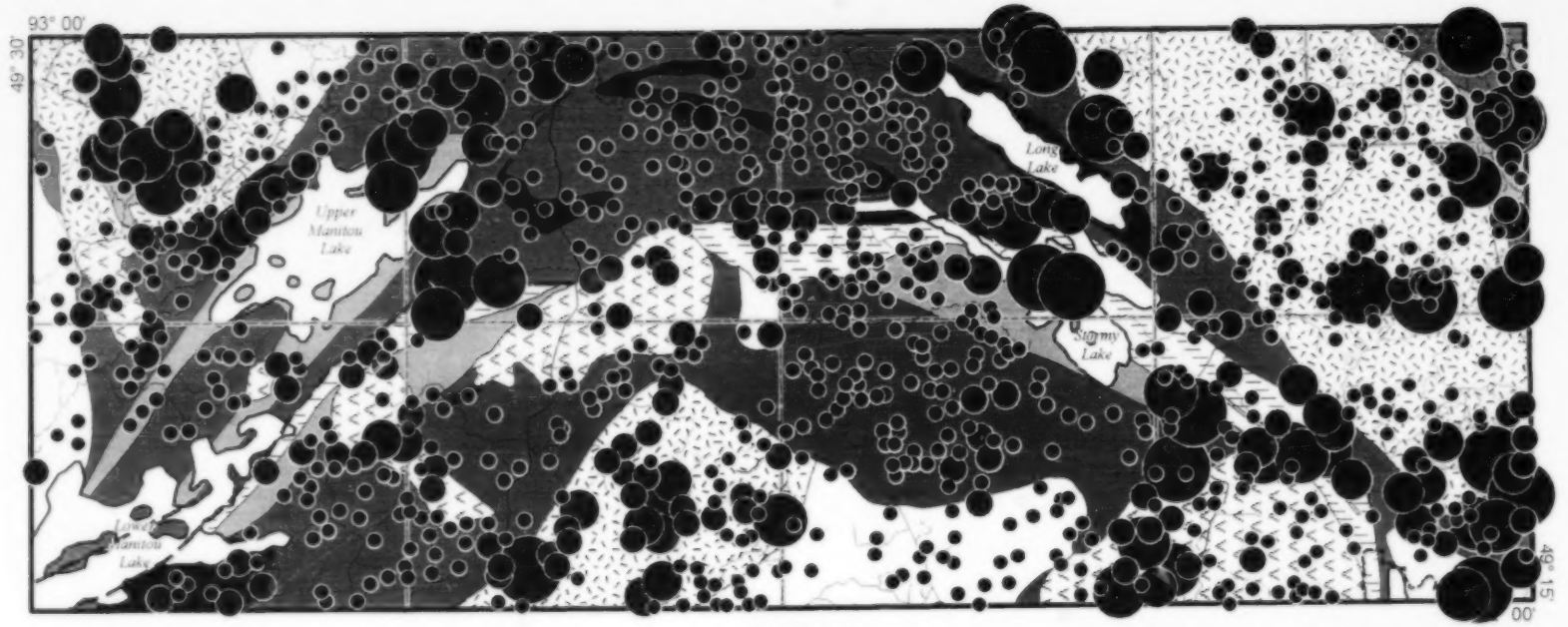
Approx %'ile		Ta (ppm) INAA
<90	•	<0.9
91 - 99	●	0.9 - 1.3
>99	●	>1.3

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Thorium in Lake Sediment

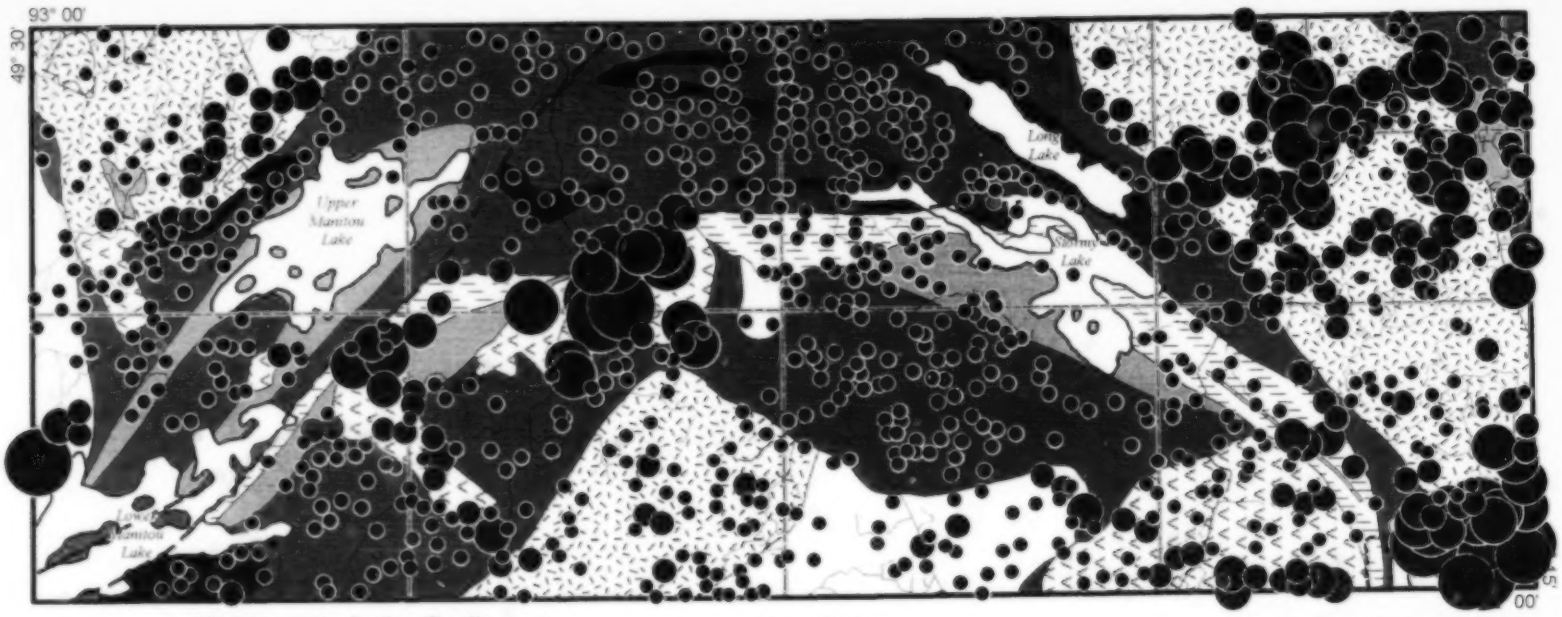
Approx %'ile		Th (ppm) ICP-MS
<75	•	<2.42
75 - 90	●	2.42 - 4.68
91 - 95	◕	4.69 - 6.05
96 - 98	●	6.06 - 7.59
>98	●	>7.59

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Uranium in Lake Sediment

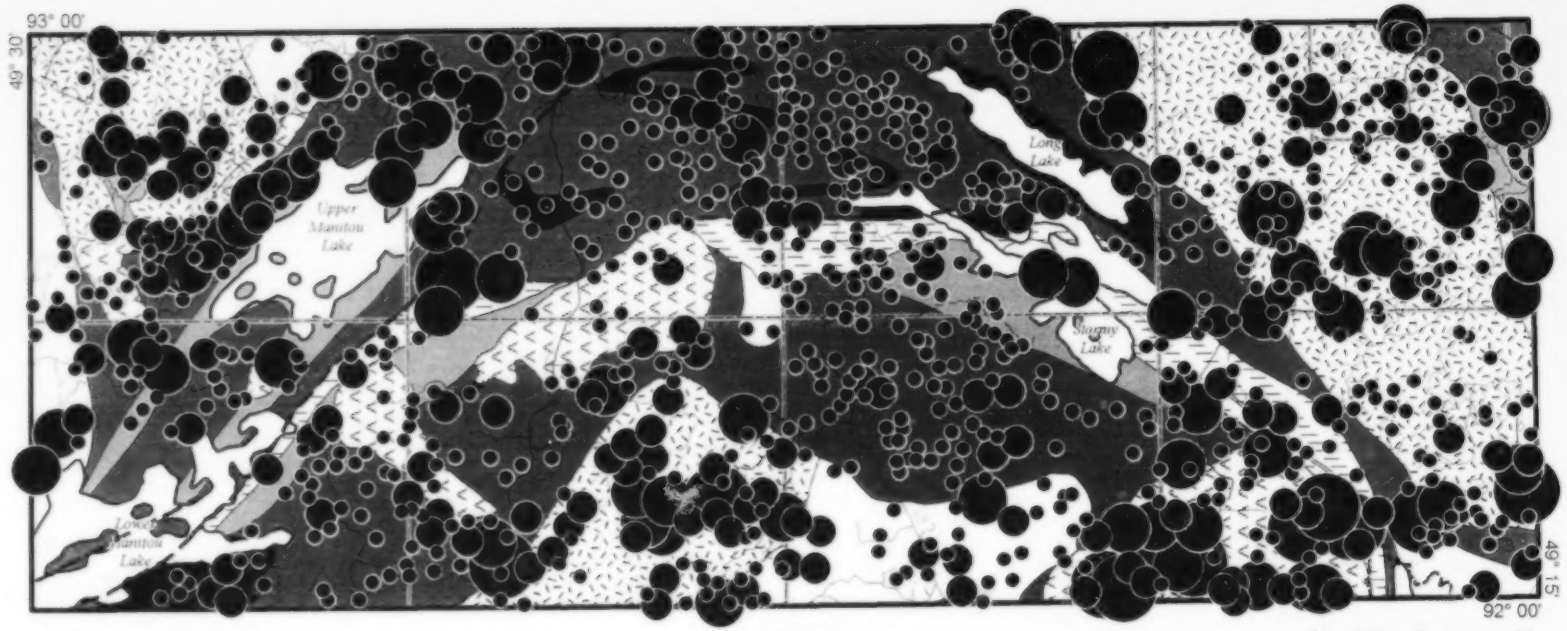
Approx %'ile	U (ppm) ICP-MS
<75	<2.79
75 - 90	2.79 - 4.56
91 - 95	4.57 - 7.01
96 - 98	7.02 - 12.41
98 - 99	12.42 - 18.19
>99	>18.19

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Vanadium in Lake Sediment

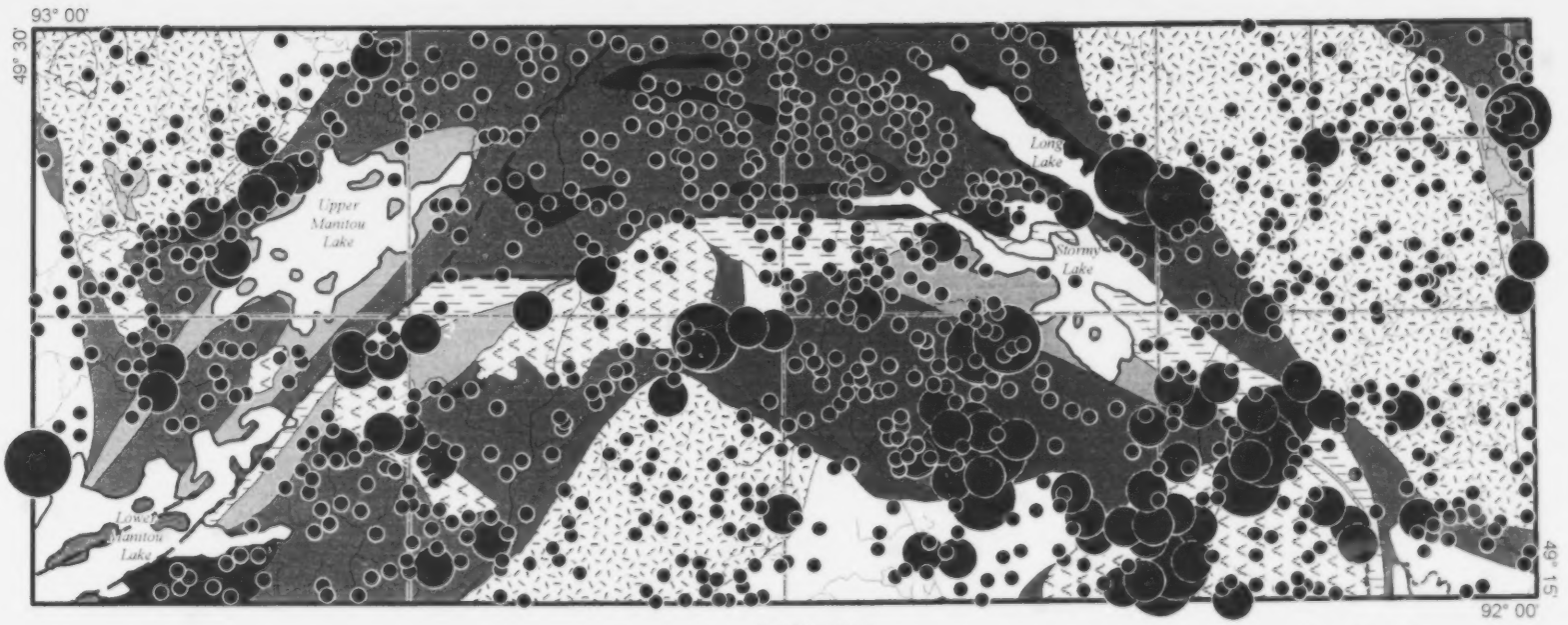
Approx %'ile	V (ppm) ICP-OES
<75	<39
75 - 90	39 - 51
91 - 98	52 - 69
>98	>69

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Tungsten in Lake Sediment

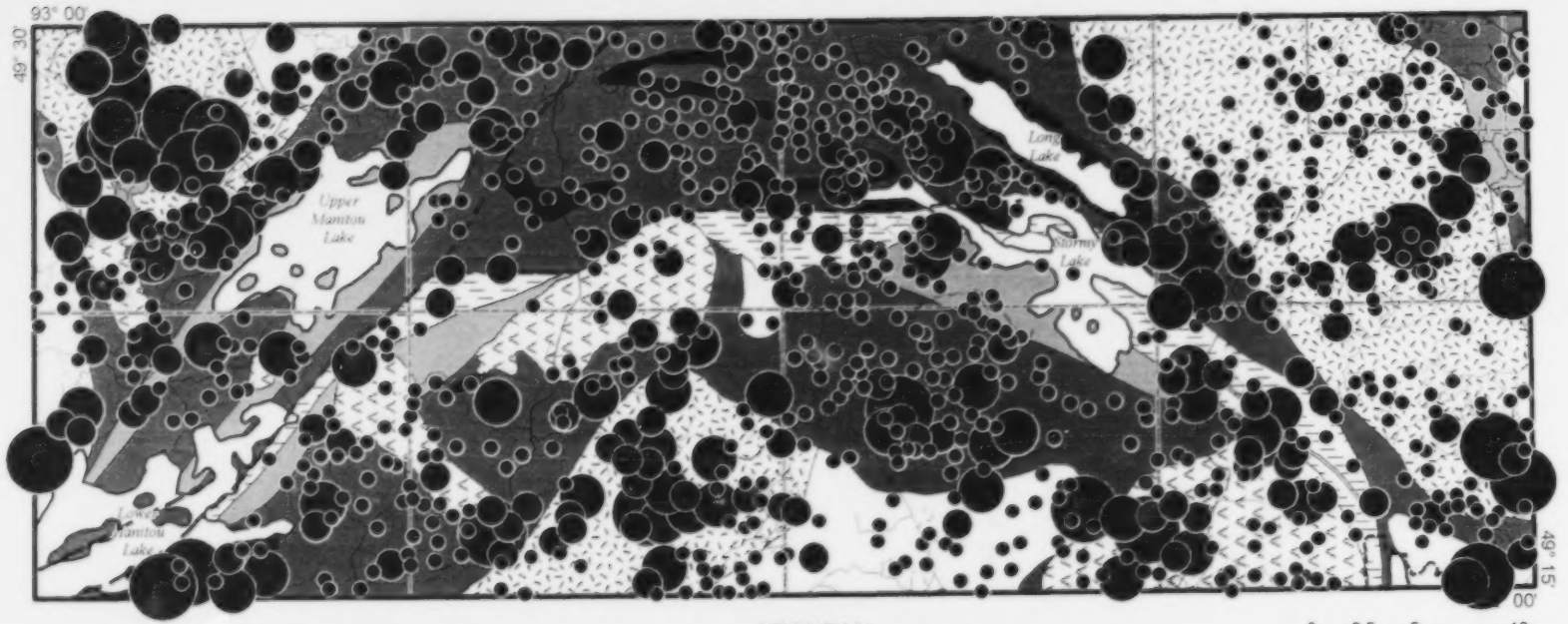
Approx %'ile	W (ppm) ICP-MS
<90	<0.21
90 - 98	0.21 - 0.38
>98	>0.38

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Zinc in Lake Sediment

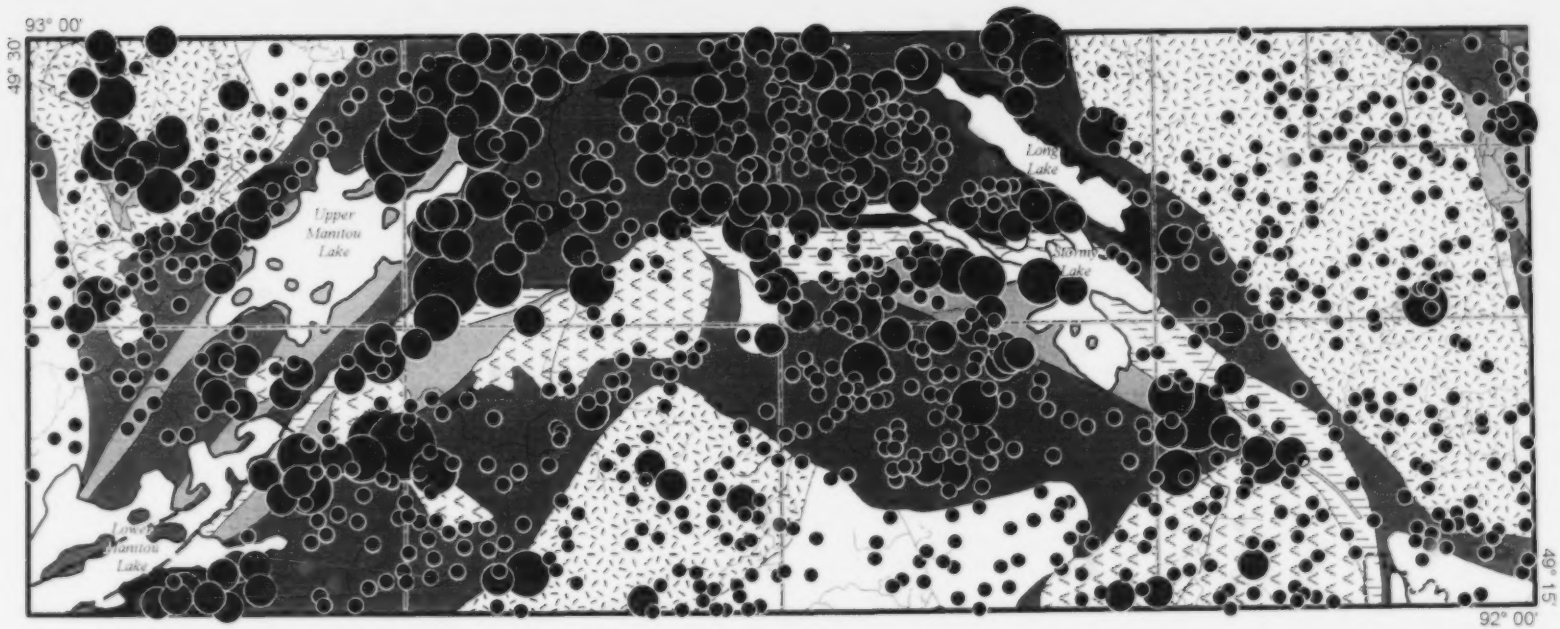
Approx %'ile	Zn (ppm) ICP-OES
<75	<86
75 - 90	86 - 101
91 - 98	102 - 121
>98	>121

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N



Zirconium in Lake Sediment

Approx %'ile	Zr (ppm) ICP-MS
<75	<2.1
75 - 95	2.1 - 5.2
96 - 99	5.3 - 8.6
>99	>8.6

ARCHEAN

- Massive granodiorite to granite
- Diorite - monzonite - granodiorite suite
- Muscovite - bearing granitic rocks
- Tonalite suite
- Mafic and ultramafic rocks
- Metasedimentary rocks
- Felsic to intermediate metavolcanic rocks
- Mafic to ultramafic metavolcanic rocks
- Faults

0 2.5 5 10
Kilometres

N

This page left blank intentionally.

Appendix 3

Lake Sediment Analytical Data
for
LOI, Ag, As, Au (INAA), Co, Cr, Cu,
Fe, Mo, Ni, Pb, REEs, Sb, U, V, W and Zn

Notes

Universal Transverse Mercator (metres easting and northing) co-ordinates are provided in North American Datum 1983 (NAD83), Zone 15.

Det Limit = Dectection limit of analytical method
Grav = Automated gravimetric method
INAA = Instrumental neutron activation analysis
INF = Insufficient sample for analysis
MS = [Inductively coupled plasma] mass spectrometry
N/A = Not applicable
NM = Not measured
OES = [Inductively coupled plasma] optical emission spectrometry

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
1	572226	5482025	44.02	0.08	1.4	12	3.50	16.4	19.4	17705	0.80	14	6.8	62.09	0.08	2.69	49.2	<0.2	59
2	571431	5480994	41.17	0.14	1.4	<2	5.77	15.1	47.4	6764	1.03	14	4.6	51.91	0.11	2.87	25.9	<0.2	59
3	571279	5479430	57.31	0.19	2.0	<2	4.44	13.4	58.9	8858	1.26	15	3.9	48.19	0.11	2.19	30.3	<0.2	47
4	571851	5478882	61.20	0.11	3.5	<2	1.71	27.0	14.8	63134	1.24	13	5.6	319.64	0.06	5.85	180.0	0.7	67
5	571743	5476579	36.29	0.10	2.3	<2	7.05	18.9	24.8	15340	1.31	17	5.4	78.49	0.10	3.67	30.6	<0.2	73
6	572221	5476095	42.53	0.14	2.3	<2	5.68	15.9	27.7	14134	1.37	15	6.8	82.42	0.09	3.30	33.4	<0.2	63
7	570624	5478749	41.70	0.06	2.3	<2	3.82	14.9	18.5	12654	0.57	17	5.2	82.97	0.08	3.78	18.8	<0.2	65
8	571602	5479006	47.40	0.13	1.4	<2	6.15	28.5	26.7	38456	1.80	17	7.5	190.86	0.11	6.03	78.3	0.3	82
9	570845	5479307	39.08	0.07	INF	INF	3.99	20.3	17.9	17300	0.77	15	3.6	107.80	0.07	4.03	24.9	<0.2	63
10	570114	5480056	61.39	0.17	1.8	<2	7.12	14.1	45.2	15816	1.34	19	5.3	38.60	0.10	1.46	44.3	<0.2	86
11	571211	5481628	48.66	0.12	2.3	<2	5.54	22.5	47.0	12691	0.91	24	3.7	56.78	0.09	3.77	27.1	<0.2	62
12	569780	5482768	25.71	0.05	1.3	12	3.42	14.1	10.3	10753	0.50	12	4.2	58.45	0.04	3.78	17.7	<0.2	38
13	572263	5480718	31.40	0.05	0.9	<2	1.46	13.2	9.8	6500	0.94	6	2.9	38.77	0.05	3.36	13.3	<0.2	21
14	569045	5479600	31.54	0.11	2.3	<2	6.12	21.7	32.6	20441	1.46	21	7.8	77.70	0.07	5.37	28.7	<0.2	71
15	568643	5479909	41.91	0.12	1.2	<2	3.31	15.3	15.1	9071	0.72	11	5.1	60.54	0.07	4.62	32.5	<0.2	43
16	568659	5480260	39.85	0.08	2.0	<2	4.99	14.9	18.4	9705	0.71	14	4.8	68.29	0.08	5.88	21.5	<0.2	49
17	571489	5474620	35.91	0.14	INF	INF	6.90	17.8	24.0	15498	0.97	17	5.1	103.76	0.07	4.32	29.1	<0.2	72
18	571132	5473532	50.65	0.12	2.8	<2	6.48	16.8	22.3	12435	1.36	15	5.6	86.01	0.12	4.15	27.4	<0.2	70
19	572357	5471990	45.13	0.20	2.4	<2	11.94	22.0	35.4	26831	1.24	18	10.5	200.58	0.10	5.14	59.3	0.2	73
20	571718	5470288	34.03	0.18	1.7	<2	40.17	35.5	30.9	112856	4.56	25	6.2	174.34	0.08	7.68	67.3	0.3	123
21	568984	5468446	50.02	0.07	1.9	<2	2.94	13.9	17.2	6729	0.99	14	5.0	33.82	0.10	1.28	18.3	<0.2	44
22	569421	5468241	50.52	0.08	INF	INF	7.73	17.9	19.9	19001	2.10	18	3.8	66.87	0.09	1.84	31.7	<0.2	80
23	571593	5464766	40.66	0.14	5.1	<2	8.55	24.6	33.1	20119	3.45	16	8.1	130.64	0.09	4.02	38.5	<0.2	61
24	572223	5460868	36.76	0.16	3.8	<2	40.32	31.3	28.4	124924	8.82	33	23.0	163.01	0.11	8.17	75.6	0.2	127
25	572449	5457884	36.91	0.11	1.5	<2	2.67	10.8	26.9	3990	3.83	13	5.0	72.60	0.08	16.92	17.6	<0.2	53
26	572171	5457284	23.41	0.12	2.3	<2	7.97	26.3	32.3	40916	2.90	21	7.9	94.32	0.09	14.43	43.1	<0.2	98
28	570164	5456239	30.60	0.16	3.0	<2	11.66	31.1	43.8	45269	2.16	30	8.4	186.28	0.09	22.04	46.6	<0.2	127
29	569386	5455991	26.68	0.14	1.5	6	8.39	28.2	33.6	31888	1.66	22	8.4	134.62	0.10	15.42	37.3	<0.2	104
33	570360	5458259	45.08	0.16	2.4	<2	13.52	20.7	61.4	15801	4.00	19	10.7	89.77	0.18	21.70	37.4	<0.2	58
34	568474	5458460	9.96	0.04	0.7	<2	3.02	13.1	12.7	8243	0.61	11	4.0	37.88	<0.03	5.63	12.8	<0.2	36
35	567664	5458635	39.65	0.09	3.4	<2	7.38	14.3	36.5	13456	2.09	17	5.0	75.11	0.10	13.38	21.7	<0.2	47
36	567353	5457897	49.24	0.13	1.9	<2	6.25	25.6	46.4	9990	2.19	18	6.0	102.60	0.13	19.07	24.1	<0.2	70
37	567030	5458800	36.84	0.07	INF	INF	5.79	13.4	26.5	7721	1.62	18	5.1	92.15	0.08	9.64	21.0	<0.2	39
38	569006	5460191	68.83	0.06	1.9	<2	7.69	16.0	26.5	10699	1.86	29	3.2	30.81	0.11	1.43	18.6	<0.2	86
40	572241	5465170	20.36	0.07	1.3	<2	4.88	15.4	13.1	11961	1.26	11	5.8	46.24	0.03	2.65	24.9	<0.2	39
41	570467	5467205	45.87	0.14	1.8	<2	6.88	14.1	25.1	11347	1.96	13	3.2	79.31	0.11	4.36	33.5	<0.2	57
42	570092	5471573	37.60	0.14	0.9	<2	2.92	16.7	16.5	8998	0.67	11	4.4	71.32	0.06	2.74	30.0	<0.2	43
43	571668	5474158	38.85	0.15	1.0	<2	8.83	20.9	25.5	25373	1.24	19	6.8	147.33	0.06	4.66	41.4	<0.2	74
44	569180	5476900	27.21	0.11	2.3	<2	13.60	23.8	30.8	68581	3.68	27	7.7	86.10	0.11	6.03	52.8	<0.2	116
45	568808	5474599	34.89	0.13	2.4	<2	6.80	28.5	33.9	39400	2.47	22	7.8	93.24	0.12	5.23	57.2	<0.2	110
47	566385	5470770	32.37	0.09	2.4	<2	6.29	23.1	16.1	38990	1.58	17	5.9	99.76	0.08	2.92	44.2	<0.2	81
48	566771	5466104	33.84	0.14	1.0	<2	1.98	15.1	13.6	7179	0.80	9	4.3	37.14	0.05	1.65	24.9	<0.2	36
49	568453	5463387	26.51	0.12	1.7	<2	14.66	35.6	30.1	35472	3.02	27	6.7	123.29	0.07	2.66	51.0	<0.2	95
50	570773	5462531	27.67	0.12	INF	INF	15.40	30.7	27.7	50278	6.33	30	5.5	132.58	0.06	7.10	49.6	<0.2	127
51	572381	5463545	28.25	0.09	1.1	<2	4.71	14.8	16.0	13362	1.58	15	5.6	67.69	0.04	2.93	24.3	<0.2	42
52	572308	5462348	39.90	0.15	2.4	<2	5.80	21.4	27.5	16040	3.33	15	9.1	116.72	0.10	4.53	48.2	<0.2	61
53	571814	5461922	37.07	0.15	2.7	<2	11.14	29.0	33.6	40051	5.91	23	6.9	142.12	0.09	7.17	53.5	<0.2	98

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	--------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	--------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	--------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
54	572300	5459598	23.52	0.16	2.1	<2	7.04	27.2	27.4	21779	3.72	19	7.9	77.01	0.08	11.63	30.6	<0.2	77
55	571016	5459341	14.81	0.08	1.0	<2	6.39	20.3	20.7	14938	2.82	16	7.0	81.13	0.06	11.19	25.8	<0.2	69
56	569985	5459465	41.04	0.27	2.1	<2	5.66	10.5	38.1	6690	3.60	13	7.2	257.14	0.07	21.30	14.5	<0.2	50
57	569736	5459837	58.48	0.10	2.2	<2	8.35	18.9	30.5	12130	2.14	22	5.5	51.45	0.12	3.57	28.2	<0.2	77
58	569662	5460732	62.82	0.10	1.8	<2	6.04	16.7	44.9	6908	1.65	19	3.9	29.53	0.10	1.28	24.9	<0.2	73
59	569069	5459663	44.35	0.17	1.5	<2	5.34	21.5	32.1	4844	2.04	19	6.6	67.34	0.09	4.22	26.1	<0.2	65
60	568140	5460114	59.42	0.11	2.6	<2	10.36	23.5	37.8	17909	2.04	17	5.6	68.43	0.11	2.07	57.0	<0.2	59
61	567611	5461381	22.60	0.06	1.1	<2	8.08	22.6	17.4	16724	2.15	19	4.6	77.16	0.05	3.42	24.5	<0.2	67
62	567498	5462293	64.07	0.11	1.5	<2	3.19	15.6	40.5	4554	3.45	14	6.7	33.05	0.10	1.37	18.7	<0.2	86
63	567085	5462545	32.48	0.10	0.9	<2	6.27	26.3	25.3	18154	1.54	18	5.9	86.76	0.06	1.90	27.9	<0.2	55
64	570262	5464268	36.90	0.09	1.4	<2	3.33	13.4	19.1	10672	1.26	13	4.2	88.58	0.08	2.08	25.5	<0.2	33
65	570215	5464638	39.95	0.20	1.2	<2	2.86	13.3	28.0	6110	1.84	5	5.1	98.84	0.07	2.61	23.9	<0.2	33
66	568823	5465702	32.23	0.13	1.3	<2	3.16	17.1	25.1	6947	1.56	11	3.8	73.05	0.07	2.77	24.8	<0.2	51
67	567819	5469983	29.74	0.07	1.4	<2	5.18	18.5	14.9	20376	1.42	21	6.1	61.55	0.07	2.38	35.0	<0.2	74
68	569422	5473176	38.59	0.10	1.4	<2	3.97	13.4	18.4	9289	0.73	14	3.5	59.46	0.06	2.88	19.4	<0.2	44
69	569951	5475961	16.80	0.07	1.6	<2	6.97	18.3	18.4	35341	1.55	18	4.4	64.07	0.05	3.57	40.0	<0.2	90
70	570726	5458956	50.99	0.14	INF	INF	5.55	15.1	38.5	9079	2.42	17	7.2	71.43	0.10	9.02	33.6	<0.2	64
71	572430	5478218	68.86	0.05	1.3	<2	1.35	6.4	13.5	4924	1.09	9	2.5	16.33	0.08	0.98	10.6	<0.2	40
72	568195	5477143	40.66	0.07	INF	INF	2.31	13.1	12.5	7299	0.49	13	4.2	39.27	0.09	2.62	15.9	<0.2	45
73	567915	5477393	66.22	0.13	2.6	<2	3.88	14.4	22.3	13727	1.58	14	6.6	51.42	0.13	3.33	32.7	<0.2	82
74	567562	5477767	41.15	0.10	1.5	<2	2.49	13.8	16.8	6746	0.62	13	4.3	52.46	0.08	4.21	25.8	<0.2	44
75	567496	5478526	55.33	0.09	1.9	<2	1.89	12.1	18.4	7211	0.99	12	4.4	35.81	0.14	2.65	30.1	<0.2	64
77	566866	5482671	54.84	0.07	1.3	<2	3.82	6.6	22.5	2350	1.07	11	3.6	30.81	0.11	1.72	10.5	<0.2	31
78	566477	5482645	43.85	0.14	1.8	<2	7.94	24.4	47.3	27258	1.84	20	7.2	107.62	0.14	4.10	49.9	<0.2	83
79	566322	5483081	43.60	0.16	2.6	<2	8.62	24.1	48.9	23429	1.83	15	7.7	89.94	0.14	3.35	52.0	<0.2	83
80	565988	5482732	48.06	0.13	2.6	<2	8.97	19.6	53.5	19940	1.46	18	6.0	66.32	0.13	1.97	50.2	<0.2	90
81	563507	5481256	28.36	0.07	0.3	<2	1.88	10.7	10.1	6302	0.53	8	5.3	23.07	0.05	2.00	12.0	<0.2	22
82	562695	5482092	21.33	<0.04	0.8	<2	2.10	8.3	8.4	7798	1.59	9	2.3	18.74	0.04	0.96	14.6	<0.2	50
83	563442	5478424	58.41	0.24	1.4	<2	1.63	9.4	36.9	7439	1.71	9	2.8	51.74	0.10	8.83	23.0	<0.2	67
84	563442	5478424	54.40	0.14	2.9	<2	3.44	13.6	20.1	14329	0.99	19	11.2	60.94	0.19	4.14	35.4	<0.2	71
85	564061	5477306	34.87	0.08	1.4	<2	1.79	10.7	12.8	4537	0.71	10	6.5	20.74	0.08	1.37	11.1	<0.2	49
86	564443	5476841	37.41	0.13	1.1	<2	2.22	16.4	13.7	4727	0.65	13	3.9	34.25	0.06	2.13	13.7	<0.2	49
87	564461	5477717	32.34	0.07	2.2	<2	6.59	16.6	15.3	15839	1.75	22	4.8	53.58	0.07	3.23	30.2	<0.2	80
88	564194	5477820	45.43	0.08	1.5	<2	2.24	13.7	14.9	4657	1.02	6	5.4	30.00	0.06	1.55	8.9	<0.2	39
89	566139	5479090	45.89	0.10	2.1	<2	5.50	18.1	19.2	10810	0.69	18	5.7	56.22	0.09	4.47	26.8	<0.2	62
90	566138	5479090	47.52	0.09	2.2	<2	3.50	11.9	14.2	5990	0.63	13	3.7	31.65	0.07	2.54	17.9	<0.2	51
91	567209	5475337	57.82	0.12	1.8	<2	1.36	8.2	18.6	6157	1.69	9	3.2	25.31	0.06	4.03	13.7	<0.2	52
92	567670	5472112	47.49	0.10	2.6	<2	3.33	10.6	13.8	8297	0.73	12	6.7	62.09	0.13	2.82	16.6	<0.2	45
93	568537	5471554	35.78	0.10	1.7	<2	5.15	15.5	21.1	11918	1.08	15	6.6	52.53	0.08	3.30	24.5	<0.2	64
94	568092	5471427	39.04	0.10	2.1	<2	5.00	14.9	18.7	12095	1.09	16	6.6	57.62	0.11	2.89	25.8	<0.2	61
95	567783	5470869	36.12	0.09	1.2	<2	2.45	15.3	11.3	13372	0.72	11	5.3	60.58	0.05	2.10	29.9	<0.2	53
96	567501	5470204	42.08	0.12	3.0	<2	6.19	18.3	24.3	14394	2.27	18	7.9	57.77	0.20	4.56	34.2	<0.2	72
97	567496	5471023	20.04	0.04	1.1	<2	2.64	10.8	6.6	6950	0.32	9	6.2	33.23	0.05	1.43	11.8	<0.2	41
98	567201	5470947	21.25	0.05	1.2	<2	2.97	11.4	7.7	8259	0.26	10	6.0	49.28	0.05	2.10	13.6	<0.2	50
99	571645	5477189	35.66	0.07	1.3	<2	5.10	15.4	22.2	10260	1.13	19	3.2	73.71	0.06	4.32	18.0	<0.2	61
100	566669	5472726	29.75	0.13	2.8	<2	13.78	23.6	23.3	40216	2.58	19	7.2	68.75	0.13	5.39	32.5	<0.2	121
101	568002	5464228	38.85	0.16	0.8	<2	2.31	14.8	23.7	7282	2.33	12	4.3	60.08	0.07	1.87	29.5	<0.2	43
102	566389	5464692	40.86	0.12	1.6	<2	8.03	19.7	33.3	13349	1.55	21	5.0	91.99	0.08	3.58	35.3	0.3	72
103	565733	5463776	57.08	0.11	1.8	<2	7.66	15.2	36.2	13505	1.91	15	4.9	47.61	0.13	2.17	23.5	<0.2	76
104	565644	5464871	55.07	0.12	2.0	<2	7.65	16.1	30.7	16065	1.66	17	3.5	48.45	0.13	2.51	22.7	<0.2	82
105	565793	5465704	31.31	0.07	INF	INF	1.43	7.8	9.6	4173	0.75	8	2.9	19.67	0.05	1.21	11.7	<0.2	23

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
106	564928	5465296	32.25	0.08	0.9	<2	1.89	10.4	11.4	5291	0.59	10	3.1	31.94	0.04	1.49	14.4	<0.2	34
107	564746	5465862	55.65	0.09	2.2	<2	5.28	16.5	18.1	9685	2.69	15	5.5	39.98	0.14	1.90	20.9	<0.2	64
108	564141	5465641	26.60	0.08	0.8	<2	1.28	32.4	9.3	3191	1.15	6	3.7	17.19	0.07	1.12	10.0	<0.2	18
109	563891	5464798	59.83	0.14	1.3	<2	1.64	5.5	35.1	3502	4.71	9	2.1	19.41	0.08	1.62	7.6	<0.2	62
110	563207	5469328	44.02	0.17	3.1	<2	8.81	28.7	23.0	30452	2.10	15	7.1	83.76	0.13	4.26	62.6	<0.2	86
111	563228	5468315	31.08	0.08	1.8	<2	9.68	20.2	15.2	20520	1.31	18	3.5	81.16	0.05	3.71	23.3	<0.2	88
112	565085	5469192	36.99	0.13	2.1	<2	5.08	20.1	18.8	16203	1.11	14	7.3	71.43	0.11	2.40	28.0	<0.2	72
113	565015	5469643	39.45	0.09	1.8	<2	3.25	15.5	13.7	10187	0.51	13	6.1	92.24	0.08	2.36	19.4	<0.2	52
114	562654	5470115	40.31	0.14	1.8	<2	5.44	22.5	18.9	18994	1.62	15	6.4	77.44	0.09	3.76	42.3	<0.2	84
115	562386	5470802	45.13	0.20	2.5	<2	6.72	21.6	34.8	21978	2.98	21	7.2	89.12	0.13	2.56	35.2	<0.2	91
116	561599	5471135	37.48	0.13	1.8	<2	6.65	23.8	21.2	20899	1.79	15	5.6	76.31	0.09	4.68	42.1	<0.2	80
118	563088	5471735	29.26	0.10	2.5	<2	5.48	19.8	17.6	20002	1.54	14	7.0	52.40	0.09	3.03	28.7	<0.2	76
119	564122	5472321	45.77	0.16	2.9	<2	8.86	22.6	21.4	29852	2.16	17	8.7	70.07	0.15	4.37	54.0	<0.2	111
120	566456	5471649	36.06	0.12	1.3	<2	3.22	15.3	13.6	11705	0.66	14	5.5	87.88	0.05	3.12	21.9	<0.2	55
121	565479	5472270	42.08	0.15	2.0	<2	6.06	19.4	16.2	22914	1.38	13	9.9	87.71	0.13	3.09	52.3	<0.2	76
122	566852	5472736	35.19	0.12	2.9	<2	3.84	23.1	22.4	20334	1.93	15	6.5	56.67	0.11	3.97	34.2	<0.2	84
124	565429	5473550	38.31	0.09	1.9	<2	4.66	16.6	15.7	9492	1.01	15	7.4	40.06	0.11	4.02	24.3	<0.2	53
125	564511	5473074	33.51	0.12	2.1	<2	13.51	24.9	17.1	31050	1.59	15	7.5	64.54	0.12	3.71	55.5	<0.2	77
126	565585	5475765	42.94	0.07	INF	INF	4.96	5.6	53.5	13893	0.98	10	2.3	11.78	0.09	0.54	15.1	<0.2	82
127	566305	5476999	25.40	0.08	2.1	<2	5.78	16.2	11.3	17190	0.59	13	4.4	57.11	0.06	2.71	26.4	<0.2	59
128	567040	5476475	36.28	0.10	1.5	<2	4.37	18.6	14.0	14495	0.65	13	6.2	56.55	0.08	3.00	31.8	<0.2	66
129	566529	5478318	35.40	0.10	2.5	<2	6.49	19.5	15.0	21321	0.93	15	5.6	62.61	0.09	2.77	43.6	<0.2	70
130	569577	5478276	31.67	0.10	1.5	<2	4.57	20.6	30.0	19256	1.61	15	7.6	70.89	0.08	4.17	34.5	<0.2	69
131	567978	5475543	39.63	0.08	2.7	<2	8.43	18.1	18.1	8206	1.85	20	4.8	63.89	0.11	12.91	23.7	<0.2	50
132	564409	5470701	27.01	0.07	2.7	<2	4.67	18.2	10.7	34847	1.37	14	4.5	99.50	0.09	2.42	39.0	0.2	95
133	560350	5470677	60.78	0.09	1.8	<2	5.32	16.8	27.3	9493	2.39	15	3.7	40.96	0.11	2.33	16.6	<0.2	53
134	558138	5469069	57.44	0.16	1.6	<2	2.96	15.2	79.6	4259	4.91	19	3.3	54.65	0.12	3.07	11.8	<0.2	48
135	557453	5466040	45.87	0.30	2.1	<2	17.17	33.6	101.9	26257	1.67	48	5.9	119.62	0.10	1.95	42.5	0.3	100
136	554943	5466493	62.69	0.11	1.6	<2	4.16	15.4	45.3	5688	2.60	18	2.6	79.29	0.11	2.08	10.2	<0.2	45
139	546397	5462668	24.40	0.12	3.7	<2	15.05	45.1	67.2	36798	2.81	47	6.8	43.60	0.11	2.30	46.2	0.4	106
140	542764	5462976	37.82	0.15	2.4	<2	10.16	36.6	73.7	19622	0.98	35	5.2	30.20	0.09	0.88	33.9	0.2	92
141	538745	5461860	40.23	0.10	2.4	<2	5.63	17.6	32.9	7908	2.19	27	5.6	28.65	0.10	1.17	15.9	<0.2	74
142	536955	5459431	35.12	0.17	4.6	<2	24.18	40.6	43.4	36538	6.83	19	8.1	60.01	0.13	2.30	43.3	0.2	87
143	533713	5458924	31.16	0.11	1.4	4	10.47	44.4	37.4	18258	1.36	29	7.2	58.46	0.12	2.22	39.4	<0.2	79
144	530454	5459004	23.07	0.15	4.6	<2	23.61	53.9	44.2	50204	4.22	46	9.0	65.18	0.12	2.88	65.5	<0.2	117
147	519391	5457102	45.19	0.12	1.8	<2	6.18	17.7	44.8	8557	1.55	18	3.8	24.43	0.08	0.66	16.2	0.2	48
148	517258	5456913	45.00	0.12	3.1	<2	8.46	26.8	40.1	13355	2.56	27	4.9	32.11	0.09	0.80	26.1	0.2	95
149	514040	5456191	50.07	0.12	3.8	<2	9.78	25.3	74.2	8776	1.64	31	3.4	31.77	0.12	0.80	19.7	<0.2	69
150	511168	5456459	39.45	0.24	5.3	<2	10.69	45.3	139.2	18085	1.28	40	6.6	44.78	0.18	2.32	36.3	<0.2	109
151	509577	5455641	44.61	0.26	7.0	<2	14.72	42.7	149.3	23364	1.93	46	5.9	39.07	0.22	3.43	46.4	<0.2	107
152	508713	5456093	46.87	0.15	19.0	<2	20.08	19.3	92.8	100869	2.17	34	3.9	25.19	0.16	1.23	49.2	<0.2	85
153	507123	5456051	70.73	0.07	INF	INF	3.55	6.6	33.1	2516	1.07	13	3.6	9.72	0.14	0.40	4.9	<0.2	39
154	507547	5456533	69.33	0.12	5.1	<2	6.24	23.4	64.1	10705	2.03	23	3.8	16.13	0.18	0.74	19.8	<0.2	164
155	507024	5456882	76.31	0.07	INF	INF	2.17	6.0	35.5	4324	2.17	10	5.3	7.39	0.16	0.61	6.6	<0.2	45
156	506223	5455841	37.67	0.18	INF	INF	11.98	32.4	93.1	19913	1.37	37	6.9	31.08	0.25	1.12	36.9	<0.2	123
159	509373	5457227	47.54	0.15	7.2	<2	9.01	25.7	93.5	17790	2.60	39	11.3	24.98	0.34	1.36	46.7	<0.2	87
160	510049	5457618	45.08	0.15	8.0	<2	7.88	26.5	87.0	18290	1.85	32	8.2	28.86	0.25	1.16	38.4	<0.2	85
161	514351	5459155	48.60	0.07	5.9	<2	4.71	12.3	56.8	3153	0.61	17	3.2	19.76	0.10	0.61	9.2	<0.2	33
162	519278	5458941	61.44	0.18	3.0	<2	7.75	17.6	53.6	16280	2.85	16	4.8	48.69	0.17	0.77	39.4	<0.2	68
163	526089	5458612	22.24	0.14	2.3	<2	14.71	48.8	37.5	25453	1.35	37	9.6	61.87	0.11	2.37	38.6	<0.2	90
164	531779	5459488	30.04	0.14	2.4	<2	20.37	45.6	41.1	23448	2.18	41	7.6	52.39	0.10	1.40	44.2	<0.2	110

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	--------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	--------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	--------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
165	538053	5458952	31.37	0.14	1.7	<2	9.05	34.3	38.8	17999	2.85	30	5.9	45.08	0.10	1.62	43.7	<0.2	85
166	543369	5458331	38.94	0.08	2.6	<2	5.39	16.9	20.3	7279	0.79	22	7.6	39.24	0.11	2.38	18.7	<0.2	43
167	548536	5459883	37.90	0.08	2.5	<2	6.57	27.3	25.5	14689	0.76	20	5.0	51.70	0.09	1.68	25.8	<0.2	69
168	558073	5466650	71.29	0.10	INF	INF	6.71	26.5	66.8	13352	2.20	36	2.5	53.41	0.09	1.35	17.1	<0.2	66
169	567804	5481762	39.90	0.12	2.7	<2	6.52	20.1	34.1	13693	0.97	18	7.1	69.18	0.11	4.74	34.0	<0.2	63
170	563728	5479231	35.85	0.09	1.6	<2	5.07	16.2	18.1	7849	0.55	17	4.4	68.13	0.08	6.32	19.1	<0.2	60
171	561003	5481604	35.93	0.11	1.4	<2	7.01	22.4	27.4	15372	4.12	19	5.6	78.68	0.09	10.08	38.1	<0.2	76
172	558820	5483252	23.95	0.08	1.2	<2	6.13	24.8	15.6	11647	0.76	21	4.9	38.51	0.05	3.66	20.2	<0.2	63
173	558717	5481139	20.79	0.11	1.0	<2	3.84	13.2	13.4	6806	2.84	8	7.0	33.72	0.11	2.78	19.7	<0.2	37
174	556055	5477326	40.96	0.21	2.0	<2	12.37	19.7	28.5	11772	1.72	16	4.2	92.95	0.10	6.58	21.1	<0.2	81
175	551437	5479378	44.53	0.25	2.7	<2	9.87	27.4	49.3	18034	19.70	19	9.0	104.36	0.15	3.95	37.9	<0.2	90
176	548548	5482536	21.63	0.15	2.6	<2	13.08	53.4	39.5	32016	0.78	41	8.9	37.74	0.09	1.65	55.0	<0.2	90
177	546773	5483013	43.46	0.11	2.1	<2	7.00	22.9	26.7	12820	0.82	27	5.7	23.24	0.09	0.82	27.3	<0.2	80
178	541476	5480757	45.75	0.06	4.9	<2	6.86	22.5	21.5	13344	0.82	14	12.7	11.07	0.19	0.36	20.4	<0.2	63
179	538103	5482960	57.10	0.10	5.2	<2	6.30	16.6	35.0	12616	1.18	18	4.0	16.17	0.15	0.95	19.1	<0.2	60
180	535346	5482814	68.46	0.06	2.5	<2	3.63	6.0	40.5	3732	2.01	10	2.3	8.11	0.11	0.71	7.1	<0.2	52
181	532821	5482565	32.36	0.09	8.8	<2	14.15	30.7	47.3	47699	0.93	32	6.3	25.81	0.14	1.01	41.8	<0.2	95
182	529156	5481870	63.55	0.07	8.3	<2	3.53	11.2	29.2	9777	2.21	13	4.0	12.03	0.13	0.85	8.8	<0.2	61
183	524265	5482525	65.55	0.13	6.6	3	3.64	9.0	58.4	5934	2.72	18	2.7	13.44	0.33	1.16	10.9	<0.2	55
184	521549	5482534	33.18	0.09	6.0	<2	10.55	34.0	41.2	21606	1.43	36	5.9	27.04	0.24	1.11	34.7	<0.2	76
185	517449	5482197	49.30	0.15	2.9	<2	7.54	20.7	49.2	10769	2.69	31	2.5	72.87	0.11	1.52	16.0	<0.2	62
186	513150	5484098	34.58	0.17	4.1	<2	11.85	37.2	36.3	22253	1.74	30	8.1	81.37	0.15	3.11	49.6	<0.2	96
188	503514	5482702	29.05	0.10	2.7	<2	14.10	50.3	27.2	32460	0.94	48	9.0	37.52	0.09	1.31	47.6	<0.2	117
190	503973	5481950	28.62	0.11	2.6	<2	15.10	52.3	28.7	29020	1.01	50	8.2	40.48	0.10	1.49	49.3	<0.2	131
191	506426	5482908	44.84	0.13	3.0	<2	10.50	39.8	32.4	18928	1.97	38	9.4	58.30	0.15	2.65	37.7	<0.2	87
192	511972	5482478	39.67	0.17	3.4	<2	10.97	36.7	38.3	18891	1.38	32	6.3	86.74	0.13	3.74	37.6	<0.2	98
193	516076	5482538	39.82	0.14	3.4	<2	10.38	27.2	29.7	19020	2.10	31	7.0	52.93	0.15	1.56	38.9	<0.2	71
194	517026	5482125	49.46	0.19	3.4	<2	8.62	27.4	57.0	13420	2.94	34	4.6	75.89	0.14	1.77	22.4	<0.2	71
195	522651	5482245	31.23	0.09	6.7	<2	11.89	34.0	39.5	23529	1.43	35	5.2	25.18	0.22	1.01	40.5	<0.2	91
196	528308	5482357	65.68	0.08	8.9	<2	6.75	14.0	43.3	17834	1.45	21	7.2	17.91	0.18	0.62	16.8	<0.2	74
197	527271	5482618	53.95	0.08	7.6	<2	9.03	18.6	34.8	15424	1.02	21	4.9	20.57	0.17	0.51	17.8	<0.2	78
198	530249	5482330	43.60	0.06	6.6	<2	7.31	16.6	46.4	20101	1.08	25	4.5	13.28	0.18	0.59	23.1	<0.2	59
199	533712	5482141	69.01	0.07	5.5	<2	5.35	8.4	29.7	9131	1.21	13	3.6	11.31	0.14	0.46	9.5	<0.2	57
200	534149	5482806	75.16	0.07	4.6	<2	4.82	8.7	49.9	7347	1.59	12	2.4	16.45	0.16	0.92	11.3	<0.2	64
201	535520	5482063	75.91	0.07	2.6	<2	3.77	9.3	55.7	6489	1.01	11	2.2	11.34	0.10	0.59	9.4	<0.2	56
203	536351	5482303	71.13	0.10	4.3	<2	4.61	10.0	88.6	5418	1.57	21	3.5	12.83	0.12	0.52	8.1	<0.2	53
204	536804	5482652	60.12	0.11	1.9	<2	6.74	14.3	54.4	14576	1.74	16	4.6	19.15	0.18	1.00	19.9	<0.2	63
205	544774	5482398	54.72	0.10	2.7	<2	4.87	21.5	34.1	11649	1.52	23	4.2	22.74	0.11	1.10	25.8	<0.2	54
206	547677	5482888	12.20	0.14	INF	INF	14.12	54.3	36.2	34711	0.46	45	10.3	45.03	0.07	1.74	58.4	<0.2	84
207	549070	5481819	27.04	0.12	2.2	<2	11.02	45.7	34.5	24892	0.94	34	8.3	36.10	0.09	1.57	41.6	<0.2	74
208	557993	5479221	47.05	0.21	1.9	<2	3.38	18.0	22.3	7569	1.75	11	7.5	55.39	0.11	3.65	44.8	<0.2	47
209	561067	5478528	41.07	0.10	2.4	<2	5.41	14.5	21.6	7008	2.84	7	5.1	46.44	0.09	9.54	12.4	<0.2	40
210	562710	5478252	37.29	0.11	1.8	<2	4.84	19.1	19.7	10498	0.81	14	8.0	59.23	0.14	6.26	25.1	<0.2	56
211	567673	5480872	24.97	0.06	1.8	<2	4.88	14.9	14.8	10618	0.55	13	4.5	57.32	0.06	4.57	19.3	<0.2	62
212	564798	5478399	37.32	0.09	1.7	<2	5.26	19.3	20.2	13978	1.31	14	6.7	53.22	0.11	3.79	35.8	<0.2	85
213	562105	5474184	38.94	0.13	2.4	<2	5.16	22.9	27.2	11753	1.14	15	7.3	80.19	0.10	8.79	30.8	<0.2	78
214	560042	5469458	52.03	0.18	1.8	<2	5.84	17.5	41.0	8526	3.04	12	4.4	63.10	0.13	2.96	38.8	<0.2	73
215	559188	5465539	62.05	0.12	1.8	<2	8.65	19.7	44.0	13986	1.16	25	4.7	32.23	0.12	0.85	28.2	<0.2	73
216	560407	5464333	51.76	0.21	4.3	<2	17.66	27.8	67.7	54954	3.36	38	8.1	81.86	0.14	1.81	46.6	0.9	115
217	561609	5462699	15.80	0.08	1.3	<2	7.02	25.3	16.7	24218	1.45	17	5.0	67.86	0.04	5.01	29.3	<0.2	69
218	561115	5462213	66.02	0.11	2.1	<2	7.35	15.1	42.8	9315	1.64	32	3.8	18.37	0.12	0.68	17.8	<0.2	88

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
219	560880	5461685	52.68	0.18	4.8	<2	11.03	32.5	61.3	21168	1.33	32	16.0	35.74	0.38	0.89	38.2	<0.2	99
220	561605	5459827	32.00	0.09	2.0	<2	15.10	37.8	43.2	31478	2.12	43	4.3	73.09	0.08	3.51	42.0	<0.2	102
221	562545	5460064	48.74	0.20	3.3	<2	12.60	36.2	62.5	26030	4.09	31	13.9	78.31	0.27	3.41	72.4	0.2	100
223	559937	5458566	42.62	0.09	2.5	<2	7.84	33.7	59.1	15682	1.00	32	5.9	86.71	0.08	2.72	32.1	<0.2	66
224	559140	5458747	38.34	0.09	1.5	<2	6.98	29.9	46.1	12142	0.67	23	5.1	68.50	0.08	1.79	26.3	<0.2	58
225	559200	5457712	46.07	0.11	2.0	<2	7.80	21.9	54.4	13234	2.09	20	6.1	49.57	0.21	2.60	30.8	<0.2	62
227	561741	5457622	62.13	0.09	2.2	<2	7.12	21.6	45.7	9188	1.14	17	3.8	72.90	0.12	2.28	26.1	<0.2	46
229	563064	5455895	46.97	0.18	3.1	<2	7.70	29.1	85.4	17284	1.15	18	6.7	151.64	0.10	5.31	43.0	<0.2	56
230	562242	5456131	50.72	0.14	1.7	<2	6.90	21.6	86.9	12506	1.21	21	4.6	122.85	0.11	4.92	51.2	<0.2	46
231	561644	5456270	45.34	0.16	2.9	<2	10.42	35.8	85.4	23425	1.74	24	8.4	121.21	0.19	3.90	61.1	<0.2	86
232	561312	5455927	37.85	0.10	2.1	<2	7.09	34.2	65.0	16368	1.09	19	5.9	97.64	0.13	3.41	37.0	<0.2	59
233	561209	5456590	32.95	0.07	2.0	<2	8.66	29.9	48.4	21853	0.86	25	4.2	85.50	0.07	2.98	29.5	<0.2	71
234	560478	5456137	48.05	0.12	3.2	<2	10.19	35.0	66.8	23281	1.22	25	6.4	100.92	0.13	4.24	48.5	<0.2	76
236	559203	5456283	47.46	0.14	2.6	<2	8.81	41.8	81.1	17873	1.19	22	5.1	130.65	0.12	4.20	55.1	<0.2	69
237	558103	5455552	35.40	0.10	2.6	<2	8.96	31.6	61.3	17976	2.10	21	9.8	86.98	0.21	5.21	39.5	0.3	69
238	557572	5456104	46.73	0.09	1.5	<2	4.81	29.8	50.4	9889	1.57	20	3.8	73.22	0.09	2.71	39.5	<0.2	56
239	558012	5456465	53.03	0.16	2.7	<2	11.70	45.2	90.0	20011	1.40	28	4.4	143.10	0.11	4.66	49.0	<0.2	80
240	557103	5457647	43.20	0.56	1.9	<2	5.73	29.8	45.6	10373	0.62	21	4.4	55.97	0.05	1.48	24.0	<0.2	48
241	556118	5457434	38.53	0.13	2.5	<2	19.03	49.6	64.8	56972	3.29	29	6.2	105.41	0.11	2.89	89.9	0.4	105
242	555360	5457221	16.10	0.11	2.6	<2	23.89	43.3	46.0	42824	2.33	30	4.4	76.07	0.07	3.33	58.5	0.4	98
243	554566	5456378	28.19	0.10	2.2	<2	9.95	23.8	78.7	14294	2.72	37	4.6	58.19	0.11	3.32	25.8	0.6	61
244	553803	5456496	30.16	0.12	1.8	<2	10.18	38.9	48.9	20917	1.04	26	5.1	85.39	0.06	1.93	50.0	0.3	76
245	552748	5456196	24.56	0.13	1.6	<2	25.19	60.3	53.5	52686	2.04	44	4.8	94.15	0.08	2.66	69.5	0.3	109
246	551807	5456354	54.11	0.24	2.0	<2	31.72	53.6	53.8	35272	1.27	23	4.6	95.19	0.12	1.57	91.6	<0.2	50
247	550862	5456014	43.79	0.09	2.0	<2	7.59	44.2	39.9	20445	0.79	28	3.9	75.96	0.09	1.42	42.0	<0.2	56
248	553015	5457211	31.27	0.12	1.7	<2	10.07	53.3	55.5	23627	1.20	31	5.3	85.07	0.08	2.09	50.9	0.2	84
249	553908	5458520	29.48	0.15	3.8	<2	26.20	61.1	67.5	104765	6.31	52	9.5	93.45	0.14	2.95	84.4	0.3	127
251	556363	5459127	46.89	0.13	INF	INF	12.78	45.1	63.8	38594	2.40	37	5.4	85.58	0.16	2.69	56.0	0.4	98
252	554226	5459194	28.04	0.14	3.4	<2	9.77	52.9	49.6	47498	3.90	32	8.1	56.48	0.12	1.92	56.4	0.3	90
253	552812	5459086	33.77	0.17	3.0	<2	20.89	48.5	77.4	45901	3.49	44	6.8	103.04	0.13	3.53	51.9	0.3	109
254	555269	5459721	20.45	0.10	1.5	<2	8.75	51.6	38.5	31825	1.73	36	4.8	52.87	0.08	1.81	49.5	0.3	88
255	561347	5459008	61.10	0.23	3.2	<2	26.75	32.0	59.1	68614	2.08	26	8.4	84.93	0.14	2.09	114.7	<0.2	54
256	562309	5458083	51.94	0.10	2.1	<2	3.91	19.0	39.9	4669	1.50	18	4.4	49.27	0.11	1.80	25.8	<0.2	19
257	564132	5458254	43.42	0.12	1.5	<2	9.95	30.9	39.3	19830	1.28	23	4.6	91.85	0.08	2.42	50.4	0.3	76
258	563742	5459140	51.66	0.18	2.4	<2	40.72	38.0	45.2	43794	1.90	29	5.9	112.98	0.09	2.33	81.8	0.4	84
259	565003	5459816	58.27	0.24	2.3	<2	16.78	20.4	72.0	14775	5.61	29	7.3	55.07	0.10	2.09	45.8	<0.2	98
261	566489	5460972	12.65	0.08	0.7	64	6.56	13.4	11.6	15554	1.13	13	4.3	51.65	0.03	3.69	18.9	<0.2	47
262	567792	5465072	36.35	0.11	0.3	<2	1.98	11.9	16.5	6246	1.32	10	4.6	37.81	0.05	1.52	19.3	<0.2	42
263	568509	5472971	34.86	0.13	2.5	<2	5.74	21.6	33.9	18096	1.75	17	9.2	72.35	0.10	4.63	30.9	<0.2	75
264	568013	5475564	28.23	0.05	1.9	<2	3.54	11.3	9.4	6821	0.70	13	3.2	38.58	0.05	5.75	12.9	<0.2	56
265	562052	5474888	42.18	0.11	1.5	<2	2.85	13.1	15.7	5917	0.67	14	5.0	60.83	0.08	6.06	12.2	<0.2	41
266	559564	5472947	52.75	0.17	1.8	<2	5.37	19.1	40.7	9619	4.26	19	5.1	56.57	0.13	3.50	32.7	<0.2	83
267	560140	5468494	42.76	0.11	2.0	<2	5.31	15.0	29.0	9859	1.35	18	4.5	47.50	0.08	2.43	20.4	<0.2	52
268	559264	5464628	53.33	0.24	2.1	<2	12.72	25.3	76.4	23320	1.73	45	5.2	63.89	0.10	1.41	43.2	0.3	94
269	559685	5462665	53.95	0.24	3.4	<2	9.26	29.8	50.8	49272	1.87	34	6.6	162.08	0.13	2.05	52.1	0.6	104
270	559436	5463136	51.71	0.22	3.3	<2	13.22	25.2	46.0	135000	1.98	42	7.1	97.99	0.12	1.78	35.7	0.7	102
271	562075	5460658	57.93	0.11	1.5	<2	8.95	23.6	52.8	10114	1.14	29	3.7	32.80	0.11	1.21	21.2	<0.2	73
272	567087	5459454	58.51	0.17	2.0	<2	2.20	18.7	36.8	28514	2.19	11	6.8	258.85	0.06	4.98	140.1	0.3	61
273	567787	5459167	31.85	0.07	2.0	<2	8.47	15.0	46.8	12281	6.97	22	5.0	48.24	0.11	4.42	25.5	<0.2	88
274	568563	5459581	37.67	0.14	1.0	<2	5.39	13.6	26.9	12895	2.37	16	7.4	92.47	0.07	7.02	18.4	<0.2	78
275	560550	5460217	27.65	0.09	2.1	<2	15.88	40.3	42.4	29817	2.42	32	4.1	64.10	0.08	3.24	41.7	0.2	93

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
276	558709	5461199	46.18	0.12	1.4	<2	9.41	26.3	81.8	25002	36.98	32	3.8	51.79	0.10	2.27	30.2	0.7	69
277	558894	5461613	43.59	0.20	2.9	<2	12.21	28.2	102.1	39446	40.44	38	6.5	54.94	0.14	1.27	33.4	1.1	100
278	558937	5462273	50.55	0.14	2.4	<2	10.12	31.5	56.2	40353	0.84	34	4.5	41.71	0.08	0.96	34.0	0.3	96
279	557439	5461179	51.67	0.09	1.8	<2	5.88	12.4	49.4	8100	9.86	19	5.3	17.65	0.09	0.86	10.0	<0.2	40
280	557353	5460441	25.09	0.07	0.8	<2	2.18	15.3	18.3	6022	0.82	15	3.0	16.20	0.06	1.07	10.9	<0.2	27
281	556628	5460426	35.84	0.09	1.5	<2	9.41	33.4	28.1	19932	1.72	25	5.6	43.00	0.08	1.24	31.0	<0.2	66
282	554480	5460354	62.33	0.09	2.4	<2	6.48	21.2	31.8	16262	1.22	22	5.9	48.14	0.14	1.52	29.9	<0.2	79
283	553915	5460807	13.67	0.07	1.3	<2	9.35	37.3	28.3	18957	0.74	26	3.1	32.93	0.03	1.18	28.1	0.2	58
284	551381	5458693	58.94	0.18	2.4	<2	13.96	28.9	65.0	17393	2.24	39	5.4	51.33	0.11	1.42	43.6	0.4	57
285	550864	5457221	53.00	0.10	3.2	<2	8.66	35.6	44.7	14378	1.31	24	5.9	54.66	0.16	1.54	30.0	<0.2	59
286	549869	5457477	43.51	0.04	1.4	<2	3.12	16.2	20.6	9564	0.64	19	3.1	25.43	0.05	0.74	11.9	<0.2	25
287	549657	5457919	28.22	0.08	0.8	<2	6.42	29.1	21.0	12418	0.66	22	3.0	31.69	0.04	0.95	22.1	<0.2	48
288	550323	5458965	52.03	0.18	2.1	<2	6.29	20.1	32.0	7526	1.48	15	4.9	43.36	0.13	2.50	33.2	<0.2	58
289	550928	5459519	42.36	0.13	2.2	<2	8.08	28.5	43.0	17238	4.97	25	4.9	59.96	0.12	4.86	38.6	0.3	129
290	550230	5460737	26.98	0.06	INF	INF	4.42	21.8	23.1	13011	0.43	19	2.7	23.70	0.04	0.63	22.1	0.3	40
291	549877	5460637	47.66	0.12	3.1	<2	10.60	27.1	43.9	18969	2.18	32	6.2	77.21	0.16	3.97	28.1	<0.2	79
292	549675	5460095	43.25	0.09	INF	INF	6.99	22.0	22.7	20831	0.83	21	4.7	46.75	0.09	1.62	24.3	<0.2	68
293	548539	5459848	38.45	0.09	1.9	<2	6.16	25.6	25.8	8972	0.69	12	4.8	53.74	0.07	1.80	14.7	<0.2	55
294	548888	5461212	47.82	0.16	1.8	<2	9.62	24.3	43.9	11428	3.70	20	6.0	64.63	0.13	4.17	38.1	<0.2	64
296	549476	5462979	51.12	0.14	2.9	<2	10.63	33.8	57.6	21216	1.24	34	5.7	43.40	0.14	2.26	32.7	<0.2	57
297	553200	5462703	55.42	0.11	2.0	<2	6.28	22.1	51.1	22018	1.06	21	4.0	36.61	0.11	0.83	34.5	<0.2	63
298	554489	5461901	62.40	0.15	2.1	4	6.02	14.5	82.4	10500	1.24	23	3.4	29.39	0.17	0.84	22.6	<0.2	63
299	565627	5478291	33.91	0.06	1.3	<2	3.12	15.1	11.6	5390	0.41	14	5.3	33.31	0.06	2.65	9.3	<0.2	35
300	562023	5476265	31.22	0.09	1.7	<2	4.96	15.4	17.3	13001	1.01	17	4.8	59.83	0.08	8.98	21.2	<0.2	63
301	560307	5473707	46.47	0.15	1.6	<2	6.18	18.4	25.6	11717	2.98	16	5.8	59.82	0.09	2.80	33.6	<0.2	66
302	560353	5470248	53.10	0.19	1.6	<2	6.11	14.2	38.1	16242	2.99	17	5.5	41.61	0.14	2.01	46.9	<0.2	62
303	559544	5469376	46.41	0.24	1.7	<2	8.30	23.3	44.5	19404	2.20	21	7.7	92.99	0.12	3.77	51.3	0.3	96
304	557892	5464113	70.88	0.11	1.9	<2	5.23	11.1	29.6	7496	1.19	20	4.8	21.61	0.12	0.80	13.5	<0.2	56
305	558222	5463609	61.34	0.09	2.8	<2	4.09	17.7	31.8	8247	1.20	22	10.3	16.93	0.23	1.02	18.8	<0.2	52
306	557469	5462793	63.51	0.17	1.4	<2	6.33	10.7	61.5	12920	1.32	16	2.5	39.64	0.10	1.18	22.7	<0.2	76
307	555952	5461911	47.00	0.12	2.9	<2	11.28	11.2	42.8	18053	1.21	22	3.2	57.60	0.11	0.94	19.1	<0.2	66
308	555512	5462156	50.45	0.34	3.6	<2	25.85	19.0	72.2	106890	2.12	33	3.2	258.41	0.08	2.19	65.3	0.3	73
309	556336	5464852	39.52	0.23	2.5	<2	13.62	46.4	53.7	74279	1.17	40	4.7	89.89	0.07	2.23	52.9	0.4	114
310	555259	5464663	56.30	0.15	1.6	<2	10.73	19.7	47.2	16450	1.67	19	2.9	51.63	0.11	1.25	32.2	<0.2	71
311	555177	5464085	52.09	0.09	1.6	<2	4.55	41.9	45.8	8638	1.16	29	3.3	37.78	0.09	0.90	20.2	<0.2	45
312	554003	5463912	55.75	0.13	1.6	<2	8.83	34.4	84.0	15028	1.80	29	2.7	43.01	0.10	1.51	24.7	0.3	66
313	553841	5464468	47.70	0.11	2.1	<2	8.10	40.3	66.3	14943	1.54	28	3.0	34.66	0.09	1.31	25.1	<0.2	60
314	551103	5464386	60.76	0.13	1.4	<2	4.83	9.5	94.1	8641	2.07	15	2.4	22.20	0.12	0.80	20.8	<0.2	80
315	547560	5463282	21.37	0.12	3.3	<2	14.35	46.1	74.0	22811	2.78	55	6.1	41.37	0.11	2.42	44.9	0.3	104
316	547388	5459438	33.46	0.11	1.0	<2	10.93	29.6	28.1	20099	1.03	22	5.8	68.09	0.11	2.60	40.6	<0.2	76
317	547775	5457878	11.31	<0.04	0.7	<2	3.43	14.7	12.2	5573	0.36	10	1.7	16.39	0.03	0.74	11.0	<0.2	24
318	547355	5456607	50.44	0.11	2.4	<2	5.50	30.8	26.9	10129	1.51	20	5.7	40.18	0.13	1.21	39.0	<0.2	85
319	546939	5457583	50.85	0.10	2.2	<2	3.41	17.8	22.0	10921	1.13	14	5.1	35.33	0.10	0.99	37.0	<0.2	55
320	546164	5456475	38.52	0.10	2.2	<2	7.64	28.5	28.3	20876	1.42	20	6.0	58.58	0.12	2.20	37.1	<0.2	83
321	545920	5455544	51.77	0.09	2.7	<2	8.20	21.3	25.8	15953	1.40	18	4.8	46.01	0.11	2.19	29.1	<0.2	68
322	544856	5456064	40.58	0.17	3.0	<2	8.83	29.5	33.4	21724	1.59	19	9.4	67.22	0.15	2.46	42.6	<0.2	71
323	544681	5457556	37.18	0.15	INF	INF	12.32	31.0	35.3	18647	1.10	25	6.9	60.79	0.11	2.30	43.1	0.3	71
324	544158	5457841	48.95	0.10	INF	INF	7.91	28.8	32.9	11686	1.28	20	7.2	52.66	0.17	1.99	29.1	<0.2	77
325	567315	5480122	35.87	0.08	2.1	<2	6.47	21.1	17.0	24030	0.92	18	4.1	69.81	0.07	6.10	34.5	<0.2	81
326	564754	5478376	38.72	0.10	2.0	<2	5.80	22.0	21.0	14930	1.30	19	7.7	53.70	0.11	3.49	34.9	<0.2	82
327	560717	5474835	39.36	0.13	INF	INF	7.00	21.1	25.4	14391	1.30	15	6.4	70.87	0.10	7.74	32.3	<0.2	79

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
328	559239	5470613	35.50	0.10	INF	INF	5.84	16.4	23.0	15092	1.06	21	4.2	63.94	0.07	2.90	23.9	<0.2	77
329	556729	5468881	65.47	0.13	2.0	<2	3.04	11.7	48.5	11324	2.33	16	3.4	43.23	0.11	1.46	20.1	<0.2	52
330	555226	5465828	53.34	0.24	2.1	<2	13.37	29.0	62.4	68084	1.68	32	5.0	125.63	0.10	2.07	49.5	0.2	100
331	552429	5464802	59.19	0.12	2.0	<2	4.17	18.1	79.2	5191	1.69	21	3.2	37.95	0.11	1.16	12.6	<0.2	44
332	550267	5464707	52.88	0.15	INF	INF	8.55	23.0	101.2	10092	1.79	23	3.9	35.76	0.15	1.70	21.0	<0.2	70
333	546634	5463496	60.89	0.14	2.3	<2	6.75	26.5	95.4	8596	7.97	40	3.5	27.38	0.11	2.12	16.4	<0.2	66
334	546029	5461495	44.42	0.13	2.2	<2	10.71	26.5	74.1	15011	1.89	35	6.3	28.02	0.12	1.07	30.1	0.3	72
335	545922	5460467	17.24	0.06	5.5	<2	29.13	37.7	34.3	83159	4.10	35	8.0	48.78	0.06	1.93	58.3	0.5	117
338	544597	5460089	39.43	0.12	INF	INF	11.87	28.6	52.8	10880	3.09	29	5.0	38.37	0.09	2.27	31.9	<0.2	72
339	544730	5458808	58.70	0.11	2.4	<2	6.35	18.7	28.7	11221	1.31	20	5.1	40.69	0.14	3.08	34.6	<0.2	96
340	543015	5457831	42.54	0.15	2.1	<2	13.09	32.4	31.2	24601	1.29	26	6.0	79.02	0.10	3.00	47.4	0.2	83
341	543211	5456875	16.84	0.04	1.5	<2	8.42	20.4	13.7	16400	0.99	14	3.1	27.95	0.05	0.96	22.6	<0.2	66
343	541712	5456652	42.76	0.11	1.5	<2	7.64	21.4	24.7	10290	0.95	20	4.9	63.76	0.08	1.97	25.0	<0.2	50
344	542171	5456996	32.16	0.09	2.2	<2	9.39	29.2	24.7	16345	0.90	22	5.8	56.38	0.10	1.71	35.8	<0.2	76
345	540849	5457981	36.79	0.07	1.6	<2	6.05	20.3	19.9	10713	0.74	21	4.7	25.77	0.07	1.11	18.0	<0.2	53
346	537801	5457190	29.76	0.12	2.1	<2	13.34	35.9	37.8	23534	3.43	26	4.6	50.13	0.08	1.76	41.6	<0.2	87
347	536527	5457365	49.90	0.15	2.0	<2	9.11	28.1	39.6	13298	1.28	23	5.8	62.29	0.11	2.11	44.2	<0.2	76
348	536195	5457171	49.99	0.17	2.7	<2	9.60	30.3	41.7	10435	1.30	18	6.0	62.49	0.11	2.13	38.8	<0.2	68
349	535336	5455710	46.99	0.10	INF	INF	7.62	21.8	28.1	9696	1.07	21	4.5	47.74	0.09	2.36	21.2	<0.2	62
350	534772	5455552	37.29	0.11	1.8	<2	9.51	17.9	27.2	10973	1.10	19	4.4	45.44	0.09	1.79	23.4	<0.2	66
351	534365	5456185	44.33	0.13	2.5	<2	11.08	29.0	32.5	16809	1.11	20	7.0	57.11	0.12	2.16	41.1	<0.2	79
352	534962	5457207	58.37	0.10	3.4	<2	6.19	19.5	28.2	16765	1.42	18	6.6	39.90	0.15	1.94	28.9	<0.2	70
353	534239	5456691	41.21	0.12	1.9	<2	9.51	32.8	34.4	13467	1.07	22	5.5	70.37	0.09	2.66	32.0	<0.2	83
354	533705	5455513	50.44	0.26	2.4	4	4.44	18.9	44.9	14589	1.92	16	5.4	38.64	0.10	1.85	36.4	<0.2	55
355	533230	5455543	56.28	0.25	3.6	<2	24.31	23.6	41.5	40670	1.97	21	7.0	59.36	0.12	2.13	67.8	<0.2	58
356	532598	5455954	53.94	0.14	3.6	<2	10.63	21.0	40.6	11080	1.70	12	5.9	50.93	0.15	1.72	23.5	<0.2	60
357	531589	5455526	31.88	0.12	2.0	4	12.75	37.4	31.2	15294	0.61	25	6.0	62.32	0.08	2.28	29.3	<0.2	72
358	530183	5455431	30.32	0.13	2.0	<2	15.44	32.5	30.1	19678	0.71	25	7.8	59.38	0.10	1.99	40.8	<0.2	72
359	529720	5455963	20.81	0.09	1.4	<2	14.13	36.0	40.4	21686	0.81	41	5.6	50.51	0.07	2.22	33.3	<0.2	93
360	530573	5456721	20.97	0.11	4.8	<2	23.05	45.3	41.5	32630	2.95	37	7.8	72.75	0.11	3.63	45.3	<0.2	105
361	532274	5457309	30.90	0.09	INF	INF	11.57	36.4	27.9	17099	0.81	27	5.0	53.51	0.09	1.57	35.5	<0.2	81
362	531433	5457429	26.17	0.10	1.2	<2	11.15	34.1	24.0	18338	0.65	26	5.7	49.08	0.08	1.34	37.6	<0.2	79
363	532433	5456662	60.55	0.09	2.1	<2	2.27	13.9	31.3	9069	1.67	11	4.2	22.49	0.09	0.77	15.9	<0.2	45
364	533125	5456506	43.94	0.08	1.7	<2	10.29	26.1	27.4	13564	0.81	22	5.0	45.26	0.09	1.65	31.9	<0.2	72
365	534464	5458671	26.61	0.08	INF	INF	9.09	30.3	23.8	15801	0.70	28	6.5	39.87	0.09	1.32	35.6	<0.2	67
366	534887	5458875	18.08	0.05	1.4	<2	7.37	27.0	17.9	12664	0.78	24	3.1	37.92	0.04	1.45	20.0	<0.2	57
367	536299	5459664	11.06	0.10	3.4	<2	31.53	40.9	38.1	42679	3.38	43	7.2	51.45	0.09	2.35	55.4	0.2	99
368	539519	5462044	69.66	0.20	1.4	<2	7.00	23.5	68.1	6763	1.08	52	7.0	51.80	0.14	2.50	10.6	<0.2	36
369	540940	5458773	27.70	0.12	1.5	<2	12.25	34.5	35.4	17973	1.06	28	5.8	48.51	0.08	2.66	35.4	<0.2	72
370	541592	5459983	47.31	0.06	1.8	<2	4.27	9.4	25.3	4750	1.61	22	2.5	14.94	0.05	0.58	10.1	<0.2	45
371	544437	5461304	31.66	0.08	1.7	<2	7.41	23.8	57.5	12257	1.25	28	3.8	18.96	0.06	0.86	18.1	0.3	52
372	545968	5463674	21.67	0.08	1.3	<2	8.59	36.3	53.1	18996	1.75	34	3.8	23.67	0.06	1.16	26.7	0.3	60
375	556029	5466370	61.18	0.13	1.6	<2	8.97	10.1	42.8	8140	1.68	25	3.0	64.70	0.09	1.57	16.0	<0.2	113
376	557350	5469016	48.53	0.22	1.6	<2	13.30	30.3	164.8	20453	4.43	37	2.7	73.22	0.10	2.72	41.9	<0.2	84
377	558828	5472060	43.21	0.12	0.7	<2	5.81	24.7	25.0	11974	2.00	14	3.5	51.61	0.07	3.26	31.1	<0.2	67
378	561989	5475830	40.33	0.08	1.1	<2	2.50	12.4	13.0	5007	0.54	14	5.4	34.15	0.09	4.20	11.6	<0.2	33
379	562292	5477345	11.87	0.06	0.9	<2	8.56	16.1	14.0	16740	1.60	13	4.2	72.16	0.06	8.61	27.6	0.3	59
380	565065	5480111	24.20	0.08	1.8	<2	4.74	16.0	16.4	15349	0.76	14	5.7	53.24	0.08	4.62	26.1	<0.2	65
381	561223	5477150	42.29	0.20	3.2	<2	7.05	25.3	29.6	23946	1.37	17	11.6	73.93	0.16	7.47	45.1	<0.2	86
382	559935	5474157	55.67	0.30	3.0	<2	48.87	26.6	38.5	58754	5.76	21	9.3	78.62	0.14	3.71	72.1	<0.2	94
383	558597	5471499	43.29	0.14	2.0	<2	7.15	22.7	32.3	14627	2.72	14	3.8	66.87	0.09	3.76	35.6	<0.2	87

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	--------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	--------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	--------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
384	556389	5468430	49.04	0.13	1.7	<2	6.65	13.1	57.1	10264	1.40	18	3.4	35.69	0.07	0.80	24.2	<0.2	83
386	548710	5465974	57.87	0.12	2.4	<2	4.60	13.4	97.7	15058	2.39	17	3.1	18.64	0.13	0.80	22.6	<0.2	77
387	545451	5464123	19.10	0.09	1.9	<2	8.23	38.3	41.3	23299	0.99	29	4.8	28.55	0.06	1.15	33.4	0.3	74
388	543375	5462385	53.08	0.10	2.5	<2	7.20	23.6	74.1	8235	0.86	51	4.1	22.45	0.07	0.82	11.0	<0.2	57
389	541869	5461829	62.14	0.06	1.8	<2	8.64	17.2	77.1	9582	1.12	20	3.4	18.40	0.11	0.54	17.8	<0.2	61
390	535509	5463303	40.66	0.15	1.6	<2	8.86	27.9	44.0	11997	1.78	27	4.1	26.52	0.05	0.81	19.7	<0.2	54
391	535247	5459979	36.64	0.05	1.4	<2	4.55	19.0	23.5	6567	0.80	26	4.1	28.07	0.08	1.47	11.0	<0.2	24
392	534612	5460132	22.09	0.08	2.2	<2	20.51	34.6	27.4	31606	2.81	28	5.7	57.18	0.07	2.59	39.8	<0.2	89
394	526500	5456827	46.73	0.12	2.4	<2	6.33	27.5	29.9	11628	0.67	25	6.1	51.53	0.10	1.55	27.3	<0.2	56
395	523778	5455481	59.51	0.15	2.1	<2	6.06	26.3	33.9	7541	1.48	21	4.3	67.71	0.16	1.79	37.5	<0.2	70
396	522625	5455689	21.10	0.08	2.4	<2	10.73	37.1	29.3	18934	0.76	36	4.8	49.60	0.06	1.82	27.0	<0.2	77
397	515756	5455712	53.84	0.11	5.8	<2	10.92	22.7	73.1	11783	2.27	27	4.2	38.47	0.14	1.13	25.8	<0.2	66
398	514238	5455716	45.44	0.12	2.4	<2	10.11	35.3	66.6	13046	1.52	25	4.4	25.09	0.12	0.56	34.8	<0.2	58
399	516402	5456562	48.05	0.11	1.9	<2	9.05	18.7	51.7	16125	1.76	29	4.0	33.57	0.08	0.70	33.6	<0.2	72
400	518213	5456871	53.29	0.08	2.6	<2	3.72	12.1	32.8	4152	1.42	18	6.8	17.37	0.12	0.56	7.5	<0.2	37
401	520683	5457358	67.17	0.11	2.1	<2	8.25	22.2	52.5	9208	2.96	27	3.8	39.42	0.11	0.80	17.4	<0.2	60
402	522627	5456978	33.56	0.14	3.8	<2	12.88	35.2	79.3	18743	3.54	43	5.6	73.28	0.16	4.55	35.7	<0.2	85
403	524070	5457272	27.23	0.14	4.1	<2	15.03	43.7	62.3	23143	3.86	46	7.1	58.71	0.16	3.76	45.4	<0.2	86
404	525467	5457417	21.93	0.12	2.1	<2	10.18	40.3	32.8	18855	0.96	35	7.4	55.59	0.08	2.04	34.8	<0.2	77
405	525178	5458014	22.07	0.14	1.9	<2	14.22	51.8	40.1	26170	1.25	41	8.5	65.39	0.10	2.46	45.3	<0.2	99
406	525936	5459250	22.12	0.14	1.8	5	13.70	50.5	40.1	26488	1.16	46	8.5	59.63	0.09	2.26	47.8	<0.2	101
407	526582	5460162	17.07	0.11	1.8	<2	13.66	47.7	33.0	28078	1.34	45	6.4	58.77	0.08	2.35	46.5	<0.2	107
409	529146	5458682	23.53	0.12	2.9	<2	10.70	43.2	40.5	23968	2.26	36	7.7	55.93	0.09	2.24	51.0	<0.2	91
410	529665	5459391	22.36	0.15	4.1	<2	22.83	49.3	45.1	44506	4.65	46	9.1	70.22	0.11	3.10	62.8	<0.2	122
411	529195	5460868	25.17	0.21	2.2	<2	12.04	46.1	43.0	26039	2.31	41	9.6	57.92	0.13	2.54	57.9	<0.2	96
412	529818	5461788	22.52	0.19	3.0	<2	16.45	49.2	44.7	22186	3.44	28	7.2	60.46	0.10	2.91	34.7	<0.2	89
413	531055	5461567	13.09	0.09	2.7	<2	12.19	43.2	30.1	23134	1.42	34	6.4	46.42	0.07	2.31	33.8	<0.2	86
414	530676	5460468	12.49	0.11	INF	INF	14.82	46.4	32.5	29120	2.12	47	7.2	53.88	0.10	2.57	52.8	<0.2	106
415	531595	5460220	21.92	0.11	2.1	<2	10.17	40.3	31.7	24019	1.00	38	7.3	48.55	0.07	1.94	34.5	<0.2	92
416	533082	5459794	28.29	0.14	2.2	<2	21.04	42.2	41.5	23436	2.51	39	5.7	50.53	0.09	1.50	44.2	<0.2	106
417	533128	5460555	39.21	0.21	2.6	<2	28.12	38.2	46.1	34105	2.55	37	9.2	50.68	0.11	1.32	70.5	<0.2	86
418	533404	5461353	17.68	0.06	0.8	<2	9.90	27.9	19.5	11979	1.32	20	3.0	22.00	0.04	0.88	20.7	<0.2	48
419	534487	5460833	42.33	0.15	3.6	<2	11.12	29.1	59.5	14776	2.18	28	4.7	51.70	0.17	3.33	35.0	<0.2	79
420	535326	5460846	29.47	0.11	1.2	<2	11.80	39.4	41.4	15361	2.79	30	7.2	45.90	0.10	1.32	39.6	<0.2	74
421	536221	5462727	21.52	0.09	1.6	<2	18.28	44.0	32.1	26253	2.77	42	5.3	41.20	0.07	1.34	44.4	0.2	89
422	537370	5462662	64.08	0.13	2.8	<2	6.80	19.3	60.1	10486	6.84	21	3.7	19.45	0.12	0.70	22.4	<0.2	69
423	541738	5462322	48.64	0.09	1.5	<2	5.71	24.2	49.2	6895	1.01	31	3.9	14.61	0.09	0.67	14.1	<0.2	69
424	544641	5462127	27.92	0.10	2.3	<2	10.55	44.0	59.1	17780	1.18	43	3.9	25.01	0.06	1.06	27.2	0.2	77
425	549179	5465208	39.23	0.14	1.9	<2	7.36	29.4	75.2	14636	1.10	21	4.7	38.88	0.10	1.21	30.7	<0.2	77
426	565835	5479921	27.55	0.08	2.4	<2	7.83	24.8	19.5	29969	1.28	15	5.7	63.48	0.10	6.52	40.9	<0.2	89
427	560565	5479419	42.33	0.18	2.4	<2	5.41	24.4	43.9	12612	12.00	14	6.9	95.59	0.14	31.07	31.8	<0.2	71
428	559739	5475261	33.73	0.14	1.3	<2	6.28	16.4	20.1	13101	2.07	12	4.1	58.72	0.06	5.62	25.9	<0.2	54
429	557550	5472544	48.87	0.21	1.8	<2	6.41	23.4	58.1	10092	3.77	23	5.2	67.38	0.12	4.25	29.0	<0.2	82
430	556712	5470079	32.62	0.23	2.0	<2	9.63	29.8	45.8	20136	2.42	29	7.6	59.97	0.10	2.74	33.8	<0.2	114
431	555704	5466784	65.30	0.06	1.8	<2	3.71	12.4	18.6	5638	1.11	15	1.8	12.78	0.08	0.40	10.0	<0.2	61
432	554615	5467874	64.23	0.11	1.9	<2	3.58	8.6	33.5	16027	1.47	15	2.7	36.49	0.10	1.19	17.4	<0.2	67
433	553873	5467808	44.17	0.18	2.0	<2	6.40	18.3	33.7	8726	1.00	23	5.6	38.63	0.09	1.10	16.8	<0.2	54
436	544634	5465090	67.79	0.07	2.2	<2	4.64	13.2	50.5	7265	1.75	25	4.5	21.61	0.10	0.76	10.7	0.2	42
437	544961	5462913	21.78	0.09	1.4	<2	7.62	38.3	41.7	16079	0.87	30	4.5	25.70	0.07	1.01	28.8	<0.2	69
438	542708	5462400	40.31	0.15	1.9	<2	10.02	35.7	76.0	16622	0.90	35	4.5	30.41	0.09	0.88	28.1	0.2	81
439	542312	5462450	48.31	0.14	1.8	<2	10.61	20.4	60.5	12852	1.08	27	4.2	20.90	0.08	0.61	28.9	<0.2	81

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
440	541379	5463343	68.18	0.14	2.1	<2	6.40	20.8	96.5	17217	1.82	34	7.1	23.28	0.20	0.89	27.0	<0.2	104
441	538506	5464525	63.01	0.08	1.5	<2	5.77	13.5	51.2	6036	1.70	42	2.5	16.20	0.10	0.65	13.2	<0.2	54
442	536590	5463933	37.75	0.07	1.5	<2	6.53	17.6	30.2	6570	1.01	22	3.9	16.49	0.08	0.47	12.7	<0.2	47
443	533811	5462630	55.93	0.09	4.4	<2	4.42	16.5	23.7	8131	0.69	14	4.0	27.05	0.06	1.23	13.1	<0.2	50
444	532993	5462028	66.00	0.20	2.2	<2	18.69	21.9	49.6	27022	2.34	21	4.6	56.28	0.15	2.20	46.2	<0.2	107
445	528750	5461971	25.23	0.17	2.7	<2	15.09	50.0	39.3	25169	0.79	40	8.8	48.18	0.10	2.01	49.6	<0.2	87
446	525761	5460803	38.64	0.16	3.9	<2	11.99	36.5	46.1	15767	1.60	31	7.3	47.74	0.15	2.20	35.8	<0.2	77
448	522974	5458733	53.56	0.17	INF	INF	16.34	60.6	85.1	19398	3.65	128	8.1	44.12	0.20	1.17	31.8	<0.2	93
449	522719	5457403	44.46	0.30	4.3	<2	36.16	40.9	84.0	55791	2.39	36	7.8	98.83	0.11	1.86	79.2	<0.2	94
451	518076	5457392	58.81	0.06	2.9	<2	3.94	7.7	26.6	4103	1.02	18	6.3	19.59	0.11	0.58	9.5	<0.2	54
452	516579	5458677	50.98	0.12	2.4	<2	3.89	15.1	41.3	6148	0.76	17	3.3	30.66	0.12	0.75	16.1	<0.2	46
453	513621	5458776	42.97	0.13	7.0	5	11.43	31.7	68.2	16417	0.75	29	4.3	32.90	0.15	1.12	30.7	<0.2	91
456	510928	5457618	62.92	0.10	4.6	<2	6.66	10.2	50.3	4530	1.25	25	3.3	10.85	0.15	0.48	7.0	<0.2	52
457	510580	5459055	66.74	0.09	4.5	<2	2.73	9.2	35.2	3829	2.20	14	2.6	15.01	0.20	0.91	9.5	<0.2	47
464	513951	5459848	47.42	0.20	5.3	<2	14.77	28.1	139.1	15774	1.83	29	5.4	44.20	0.27	1.26	46.2	<0.2	107
465	514896	5460153	50.87	0.11	2.7	<2	7.28	19.8	61.9	7253	0.70	21	4.6	27.80	0.14	0.89	15.4	<0.2	48
466	515885	5459778	46.72	0.16	8.9	<2	7.05	19.7	78.4	10747	0.96	21	3.5	34.51	0.14	0.91	22.9	<0.2	59
467	518343	5458264	67.60	0.07	3.2	<2	6.42	11.4	37.7	6023	2.02	20	3.3	23.39	0.12	0.69	13.7	<0.2	64
468	519547	5458001	57.66	0.18	2.7	<2	5.93	20.5	71.6	10310	5.30	22	4.6	46.37	0.14	0.80	38.0	<0.2	77
469	521015	5458544	53.25	0.17	3.2	<2	11.88	27.7	50.7	17271	1.93	23	6.5	69.20	0.15	0.99	50.8	<0.2	58
471	523872	5459678	32.55	0.15	3.9	<2	15.32	43.8	61.9	43744	1.89	44	4.9	73.88	0.11	1.18	45.2	<0.2	98
472	530048	5462509	24.42	0.22	2.9	<2	14.64	48.4	45.4	31970	2.59	39	7.9	58.81	0.06	2.76	50.4	<0.2	102
473	534604	5463660	46.93	0.11	2.9	<2	6.71	20.8	40.7	7106	1.00	24	6.8	26.27	0.13	0.94	14.0	<0.2	57
474	537396	5464211	54.18	0.07	2.2	<2	5.40	13.8	45.9	5116	0.82	23	6.1	15.08	0.11	0.65	9.6	<0.2	36
475	564584	5479684	35.97	0.10	2.0	<2	7.63	20.0	19.4	20887	0.75	23	5.3	78.60	0.09	6.89	35.5	<0.2	86
476	557111	5476395	12.77	0.12	1.8	<2	8.88	16.1	25.0	16434	6.91	14	5.1	55.08	0.07	6.56	27.2	<0.2	59
477	556896	5475287	40.06	0.21	3.1	<2	10.70	25.2	33.6	29437	7.32	22	6.4	95.60	0.11	7.86	38.5	<0.2	97
478	556829	5473697	64.50	0.10	1.7	<2	3.23	7.9	27.3	5010	5.83	12	3.0	19.29	0.10	1.35	13.2	<0.2	69
479	556186	5472262	41.78	0.23	2.0	<2	9.08	22.6	29.5	12842	2.90	24	5.6	57.22	0.06	2.30	20.4	<0.2	166
481	555091	5469333	41.87	0.18	2.9	<2	21.27	43.7	58.3	50404	1.74	40	6.1	67.96	0.08	1.27	64.6	<0.2	112
482	548891	5466621	71.12	0.08	2.2	<2	4.79	17.5	47.6	9699	2.06	18	3.2	12.69	0.12	0.80	14.7	<0.2	59
484	547219	5465691	12.09	0.08	2.6	<2	13.60	40.3	40.9	25399	2.09	42	5.3	35.11	0.08	1.72	45.6	<0.2	86
485	543809	5464831	47.50	0.16	2.6	<2	6.03	34.2	99.3	9586	2.69	42	5.6	29.61	0.14	1.31	17.8	0.3	54
486	544400	5463758	27.37	0.10	1.5	5	8.70	31.2	53.6	16633	1.09	33	4.9	24.96	0.08	1.05	25.9	0.2	72
487	543921	5463028	37.46	0.13	1.8	<2	9.84	34.5	59.0	18442	0.70	35	3.8	27.04	0.07	0.82	27.1	0.3	96
488	544132	5465872	51.43	0.10	2.5	<2	8.32	21.0	80.7	12528	2.43	25	4.3	23.88	0.14	1.12	19.8	<0.2	79
489	542019	5463918	52.48	0.16	2.0	<2	11.92	24.4	153.6	10607	1.30	39	3.1	28.27	0.07	1.17	18.9	<0.2	97
490	541828	5463344	57.95	0.09	1.8	<2	13.79	18.8	110.2	6597	1.98	30	2.5	19.41	0.12	0.87	17.2	<0.2	85
491	541240	5463977	65.49	0.10	2.1	<2	9.31	15.7	86.2	7040	2.31	35	2.2	22.45	0.11	0.98	14.3	<0.2	67
492	539033	5465030	72.36	0.08	INF	INF	11.44	18.4	53.9	5842	1.17	40	2.2	14.79	0.09	0.48	12.9	<0.2	69
493	536899	5466892	62.74	0.08	INF	INF	3.96	12.2	32.7	4638	2.14	19	3.2	21.22	0.11	0.57	14.3	<0.2	22
494	537503	5467627	53.69	0.14	5.4	<2	11.69	20.7	45.9	13938	8.39	17	21.7	26.09	0.31	0.69	28.7	<0.2	69
495	538093	5466644	60.02	0.09	2.6	<2	6.66	17.5	54.0	9304	1.20	20	4.3	20.91	0.10	0.64	20.5	<0.2	59
496	539469	5466213	61.98	0.09	1.8	<2	4.64	12.9	64.7	3096	0.79	26	4.3	19.76	0.12	0.69	7.4	<0.2	46
497	540054	5466181	44.84	0.14	4.4	<2	34.61	31.8	78.3	34842	1.09	38	9.1	32.89	0.17	0.71	45.9	<0.2	75
498	540964	5465662	60.31	0.15	3.1	<2	7.94	18.5	78.9	14867	1.45	21	3.3	38.91	0.13	0.62	42.6	0.2	89
499	541963	5464386	52.54	0.08	2.4	<2	8.83	8.7	66.6	4363	1.33	37	4.4	18.38	0.10	0.60	12.7	<0.2	135
500	542605	5466282	57.02	0.07	2.4	<2	5.58	10.6	46.9	5221	1.53	19	3.8	13.51	0.13	0.55	13.1	<0.2	59
501	541401	5466858	49.27	0.11	2.7	<2	5.90	21.9	94.7	9130	1.05	21	3.4	24.15	0.11	0.79	21.0	<0.2	53
502	543203	5467502	70.04	0.08	3.3	<2	4.17	12.1	69.5	7793	1.95	25	3.9	17.23	0.14	0.88	14.3	<0.2	62
503	543164	5468033	64.08	0.09	2.4	<2	4.91	17.0	110.0	8965	1.46	22	3.0	22.66	0.12	0.75	17.3	<0.2	59

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
504	542787	5468172	63.78	0.07	1.8	<2	4.87	9.6	59.5	3781	1.07	17	2.5	10.71	0.07	0.42	6.6	<0.2	50
505	543784	5466859	71.56	0.08	2.5	<2	7.01	13.9	53.6	5222	3.41	18	4.0	13.89	0.14	0.68	13.0	<0.2	76
506	544544	5466953	59.96	0.12	2.5	<2	5.19	12.0	80.0	9481	2.67	19	3.1	25.67	0.14	1.00	19.0	<0.2	62
507	545659	5465488	35.72	0.25	4.6	<2	11.04	38.0	107.7	28922	1.79	40	9.2	112.33	0.17	2.24	41.3	<0.2	107
508	546384	5466208	65.47	0.09	1.9	<2	3.12	10.7	47.1	10316	2.25	16	2.2	26.39	0.11	0.76	13.0	<0.2	53
509	545777	5467621	59.98	0.11	1.8	<2	6.21	14.9	82.1	16283	2.26	24	2.9	21.47	0.13	1.20	20.6	0.8	77
510	546953	5467380	60.10	0.14	INF	INF	5.67	19.9	50.7	10819	2.01	18	4.5	29.52	0.13	1.53	23.0	<0.2	88
511	547357	5467722	75.22	0.10	2.1	<2	2.88	11.7	41.9	8533	2.53	16	4.1	19.13	0.10	0.85	7.4	<0.2	56
512	547862	5467867	78.82	0.09	INF	INF	3.21	9.4	41.1	15783	5.62	12	2.5	14.67	0.17	2.46	9.7	<0.2	64
513	547114	5468118	80.33	0.12	3.4	<2	3.08	8.5	42.3	18340	4.69	10	2.8	21.98	0.15	1.95	12.9	0.5	52
514	546514	5468460	80.93	0.08	INF	INF	2.45	12.1	26.5	3206	1.20	8	2.0	11.62	0.12	0.57	8.1	<0.2	49
515	546018	5468609	52.15	0.12	3.2	<2	6.58	23.7	63.4	13334	1.34	26	4.5	27.58	0.13	0.88	25.2	<0.2	69
516	545612	5469047	66.66	0.10	INF	INF	4.10	20.4	49.8	9213	1.73	20	3.2	25.76	0.14	0.79	16.6	<0.2	51
517	545556	5469710	55.11	0.12	2.5	<2	4.93	18.9	55.8	10018	1.62	18	3.0	22.85	0.13	1.05	15.3	<0.2	61
518	546660	5469409	71.61	0.12	INF	INF	3.09	9.7	29.8	6060	3.84	12	4.1	35.45	0.14	1.89	14.4	<0.2	59
519	546464	5469864	85.05	0.07	INF	INF	2.39	6.8	25.5	9492	9.59	11	1.9	25.94	0.13	1.92	8.4	<0.2	44
522	553412	5471938	66.55	0.16	2.0	4	4.88	13.2	74.7	16293	2.77	16	2.1	33.86	0.08	1.64	18.2	<0.2	92
523	552905	5472376	60.10	0.16	2.5	<2	5.45	10.2	105.4	27785	4.00	21	3.9	24.35	0.10	1.86	25.8	<0.2	102
524	552405	5472686	68.98	0.10	1.1	<2	4.19	8.4	61.2	20702	1.14	18	3.1	22.69	0.08	1.23	23.9	<0.2	75
525	554810	5472174	34.90	0.23	2.6	<2	11.94	34.2	56.5	20884	3.33	26	7.7	72.92	0.08	2.94	36.1	<0.2	108
526	555420	5473270	52.24	0.27	1.6	4	4.70	14.9	56.5	11238	20.65	22	4.1	60.07	0.10	2.99	16.5	<0.2	61
527	555930	5473556	53.74	0.18	1.7	<2	5.94	9.7	47.9	5740	5.34	23	3.7	53.05	0.11	2.20	11.7	<0.2	65
528	558534	5475474	34.51	0.12	1.3	<2	5.39	18.7	22.3	10327	1.87	16	4.9	67.72	0.06	4.59	17.0	<0.2	65
529	558625	5476167	50.47	0.11	1.9	<2	2.85	7.8	20.3	4252	9.25	12	5.6	35.42	0.08	3.72	9.4	<0.2	42
530	566961	5480804	38.30	0.07	1.7	<2	5.46	21.4	16.0	18637	0.81	17	4.4	65.80	0.08	5.24	30.4	<0.2	72
531	562100	5480218	43.32	0.14	1.8	<2	4.66	17.0	20.7	14762	2.09	13	7.5	87.38	0.10	9.75	48.5	<0.2	77
532	557837	5477075	41.21	0.17	1.4	<2	4.48	15.3	23.7	8787	7.09	15	5.0	66.33	0.06	4.53	20.4	<0.2	61
533	554847	5476281	48.62	0.38	3.0	<2	10.74	16.8	33.7	11222	10.50	16	13.7	86.08	0.21	5.11	41.6	<0.2	74
534	552782	5478910	27.48	0.18	3.1	<2	16.22	41.6	31.0	34743	4.18	32	12.6	60.98	0.11	3.20	58.7	<0.2	91
535	551980	5481425	25.38	0.17	2.2	<2	17.71	42.9	29.1	39356	3.32	34	11.2	62.29	0.09	3.26	71.0	<0.2	105
536	547145	5481760	65.04	0.08	2.3	<2	5.47	21.0	33.2	11154	1.50	18	5.1	18.53	0.15	0.95	17.7	<0.2	64
537	543089	5479219	63.05	0.10	3.5	<2	5.56	9.2	64.7	15324	1.38	12	4.1	14.92	0.13	0.62	25.0	<0.2	71
538	539303	5480867	70.12	0.07	3.9	<2	3.42	8.7	49.0	4143	2.17	11	2.1	9.13	0.09	0.58	6.9	<0.2	42
539	536379	5481334	20.12	0.06	10.0	<2	12.61	18.0	34.7	30560	0.77	20	3.3	15.84	0.09	0.59	22.0	<0.2	69
540	534286	5481552	45.81	0.13	INF	INF	9.12	18.8	68.8	20993	1.26	24	30.4	17.59	1.03	0.73	33.8	<0.2	99
541	532900	5480504	45.36	0.12	7.6	<2	9.11	22.2	72.4	17829	1.10	26	6.3	19.69	0.23	0.84	39.1	<0.2	85
542	530943	5480191	50.26	0.11	41.0	<2	7.72	14.8	68.6	11231	1.44	10	4.4	15.46	0.37	0.72	17.3	<0.2	65
543	529735	5480435	46.64	0.10	15.0	<2	9.48	19.3	47.0	21315	1.40	19	6.4	17.87	0.34	0.68	29.2	<0.2	78
544	526377	5481677	16.98	0.11	14.0	<2	17.61	43.0	38.4	51733	1.07	42	7.3	34.11	0.18	1.07	54.6	<0.2	94
545	524886	5481903	23.42	0.15	10.0	<2	14.95	44.5	59.1	32406	1.08	44	8.5	34.62	0.33	1.28	52.6	<0.2	93
546	523704	5481812	71.40	0.15	17.0	<2	9.17	13.2	101.0	29486	1.93	25	2.4	15.33	0.71	0.95	26.1	<0.2	103
547	521027	5481073	34.42	0.13	8.7	<2	11.19	31.0	46.8	20478	1.62	31	5.8	30.51	0.24	1.08	36.0	<0.2	94
548	519344	5481853	68.26	0.18	4.8	<2	4.42	14.9	32.8	20383	2.86	22	4.2	46.43	0.20	0.94	26.2	<0.2	91
549	518223	5481118	49.96	0.26	7.7	<2	29.08	30.7	48.9	55646	1.99	29	12.8	73.90	0.21	1.10	69.7	<0.2	111
550	516308	5481602	46.46	0.20	4.2	<2	7.95	27.8	54.6	16086	2.53	31	5.4	85.52	0.16	1.98	26.1	0.2	72
551	514990	5481139	52.98	0.14	2.2	<2	5.44	18.4	35.9	8574	1.75	23	4.3	47.15	0.14	1.27	29.2	<0.2	70
552	514190	5481036	47.70	0.21	INF	INF	25.32	30.9	39.8	25173	2.43	26	6.7	105.83	0.16	2.99	59.6	<0.2	90
553	513131	5481058	40.82	0.15	3.1	<2	9.08	32.1	39.7	15654	1.35	30	6.1	83.54	0.11	3.80	30.3	<0.2	81
554	512229	5480552	38.76	0.17	3.9	<2	9.93	34.9	41.0	17357	1.54	32	6.2	91.00	0.12	4.05	35.4	<0.2	95
555	509918	5480281	23.29	0.12	3.9	<2	12.42	44.5	34.3	24894	0.77	38	7.8	55.24	0.10	3.56	44.6	<0.2	88
556	508846	5478894	49.58	0.12	2.7	<2	8.83	27.0	37.7	12205	1.79	25	4.0	74.59	0.15	3.33	19.8	<0.2	71

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
557	506913	5478592	31.12	0.19	3.2	<2	19.15	49.6	34.7	28988	1.55	43	8.6	83.11	0.08	2.34	50.6	<0.2	123
558	503880	5478434	36.92	0.13	3.3	<2	14.03	51.8	30.2	24596	1.21	40	7.7	56.80	0.08	1.59	42.5	<0.2	112
559	504091	5480210	20.63	0.13	1.8	<2	13.64	57.1	19.7	27090	0.58	39	7.5	33.70	0.07	1.01	43.0	<0.2	133
560	505218	5481627	55.54	0.07	3.0	<2	4.12	16.2	16.9	7149	1.41	17	4.6	22.09	0.11	0.82	13.9	<0.2	57
561	502642	5480929	52.31	0.10	4.8	<2	10.13	36.9	27.1	14284	3.05	38	5.8	36.42	0.13	2.16	32.9	<0.2	117
563	500797	5478091	50.19	0.06	2.7	<2	6.56	20.3	19.6	9979	1.81	23	5.7	24.41	0.10	0.97	17.8	<0.2	49
564	504290	5477835	36.63	0.14	3.9	<2	14.66	47.4	35.1	25164	1.80	44	8.0	62.67	0.09	2.26	42.5	<0.2	140
565	506747	5477746	27.38	0.18	4.0	<2	21.64	56.4	40.1	32566	1.65	44	9.0	87.06	0.09	2.69	50.4	<0.2	130
566	508822	5477936	30.11	0.15	INF	INF	15.24	37.9	31.2	22036	0.95	43	5.9	102.04	0.07	3.18	41.0	<0.2	122
567	511147	5478466	43.48	0.19	3.5	<2	10.10	24.2	36.2	20426	2.99	24	7.1	96.82	0.15	3.71	42.6	<0.2	76
568	510717	5477348	37.91	0.17	2.7	<2	10.14	41.1	50.5	20215	5.31	28	6.8	99.02	0.13	2.88	33.9	0.3	74
569	511134	5479574	40.42	0.14	2.4	<2	8.94	27.8	32.5	15897	1.37	29	6.1	85.60	0.11	3.06	32.6	<0.2	86
570	512141	5479446	29.17	0.12	3.9	<2	11.40	32.2	33.0	20206	1.32	33	5.3	77.07	0.10	3.81	33.1	<0.2	101
571	513165	5479873	42.39	0.25	INF	INF	11.17	48.7	55.9	17016	2.36	28	9.4	103.74	0.15	4.77	37.3	<0.2	79
572	514351	5478749	37.13	0.17	2.1	<2	9.47	25.9	34.3	16581	1.04	22	5.0	59.56	0.09	0.83	32.7	<0.2	79
573	515476	5479749	58.44	0.17	3.4	<2	7.75	20.6	44.3	9714	2.49	23	4.3	65.32	0.17	1.14	33.1	<0.2	87
574	515960	5480339	43.19	0.22	3.8	<2	9.80	31.9	63.4	14726	2.61	28	5.2	88.86	0.17	1.89	26.9	0.2	70
575	517289	5480257	49.29	0.20	5.1	<2	10.34	23.1	90.6	20592	2.78	33	4.5	55.71	0.20	1.29	37.9	<0.2	103
576	517983	5479823	41.21	0.16	2.9	<2	9.51	30.9	52.9	19587	0.96	33	5.0	42.09	0.14	1.34	31.8	<0.2	86
577	519177	5480318	57.78	0.11	3.2	<2	4.44	7.8	30.1	3515	1.18	15	3.7	12.07	0.14	0.56	7.7	<0.2	62
578	520152	5480568	27.24	0.14	6.5	<2	14.73	48.3	45.8	30613	0.86	40	6.1	31.72	0.16	1.20	50.8	<0.2	83
579	521704	5479877	19.13	0.13	8.3	<2	16.30	50.1	44.3	35143	0.68	44	7.3	33.11	0.22	0.98	54.9	<0.2	97
580	520934	5479054	54.48	0.08	6.5	<2	6.22	17.6	57.5	12943	2.30	22	4.1	11.90	0.30	0.99	19.4	<0.2	49
582	519225	5478620	22.21	0.14	10.0	<2	15.53	44.3	67.3	37179	1.84	48	7.5	33.70	0.26	1.15	55.6	<0.2	90
583	518135	5479012	54.33	0.09	4.2	<2	4.04	15.8	34.1	5977	1.18	24	2.7	33.24	0.11	0.98	11.2	<0.2	44
584	518464	5478086	26.61	0.13	INF	INF	14.29	47.8	45.9	30690	0.71	45	6.3	36.84	0.13	1.55	49.8	<0.2	93
586	521842	5477827	14.69	0.15	6.2	45	16.38	50.1	37.3	34825	0.42	42	7.1	28.66	0.17	0.66	58.4	<0.2	94
587	522623	5477925	73.79	0.09	5.7	5	2.89	7.8	52.0	11627	2.46	16	3.5	7.53	0.29	0.61	10.9	<0.2	70
588	522346	5477959	55.99	0.10	9.1	<2	7.50	19.8	56.8	19368	2.01	23	3.3	14.56	0.27	0.69	23.3	<0.2	114
589	523343	5477806	64.79	0.06	7.4	<2	4.70	12.9	35.7	10408	1.82	17	2.3	12.03	0.24	0.68	14.3	<0.2	45
590	524060	5478538	53.96	0.06	6.5	<2	4.80	14.6	29.0	10240	1.32	16	2.7	12.55	0.21	0.52	16.8	<0.2	38
591	526891	5477800	67.85	0.07	5.6	3	4.80	8.4	31.9	7963	1.13	9	3.3	10.92	0.13	0.63	13.3	<0.2	47
592	527915	5477685	43.67	0.12	21.0	<2	11.90	17.2	52.0	51297	1.47	29	20.9	18.50	0.63	0.80	30.6	<0.2	96
593	530126	5478257	30.09	0.07	7.0	<2	9.71	22.7	34.1	25197	0.89	29	3.8	17.17	0.12	0.70	33.9	<0.2	67
594	529433	5479605	42.12	0.09	11.0	<2	9.04	22.5	43.8	23556	1.00	23	6.4	18.06	0.23	0.65	34.1	<0.2	74
595	530951	5478623	69.15	0.08	4.7	<2	3.63	8.3	51.6	5755	1.42	10	2.9	10.82	0.11	0.56	8.8	<0.2	53
596	531489	5477938	34.43	0.08	5.5	<2	11.65	30.1	62.5	22702	0.76	29	4.3	17.82	0.12	0.71	34.9	<0.2	68
597	532413	5478020	38.70	0.10	INF	INF	13.91	30.1	78.4	22850	1.10	31	7.1	19.31	0.21	0.82	36.5	<0.2	75
598	533519	5479799	38.81	0.08	4.7	<2	11.24	28.2	50.6	21368	0.82	30	4.1	16.32	0.14	0.63	34.1	<0.2	72
599	533934	5480750	44.03	0.12	8.6	<2	10.97	24.7	68.9	21805	0.91	28	17.3	17.96	0.43	0.82	31.9	<0.2	86
600	535966	5480571	42.37	0.08	3.5	<2	9.30	31.3	64.8	16981	0.97	25	4.5	14.76	0.16	0.76	26.1	<0.2	61
601	536649	5479937	51.85	0.10	4.8	<2	10.71	20.0	77.6	17994	1.11	24	3.3	15.34	0.12	0.82	24.5	<0.2	71
602	537179	5478935	61.66	0.10	4.1	<2	6.19	10.2	67.6	5298	1.20	14	4.4	13.87	0.17	0.86	15.0	<0.2	60
604	536390	5478733	61.27	0.09	3.9	<2	4.60	9.4	57.8	9604	1.27	12	5.9	10.22	0.14	0.57	16.3	<0.2	58
605	536456	5479304	55.55	0.11	3.9	<2	7.89	16.8	64.9	11103	1.45	16	4.4	13.12	0.17	0.77	17.0	<0.2	57
606	536854	5479853	55.47	0.10	8.5	<2	6.26	14.7	66.5	15359	1.38	16	18.0	11.64	0.51	0.65	21.5	<0.2	68
607	536545	5480637	49.68	0.08	3.7	<2	10.00	26.1	68.7	15720	1.20	25	4.4	14.70	0.18	0.75	25.3	<0.2	61
608	537200	5478218	60.25	0.09	3.0	<2	6.86	14.3	65.9	10688	1.18	16	6.5	15.50	0.20	0.72	19.3	<0.2	75
609	537419	5479698	54.29	0.10	5.2	<2	6.97	17.0	53.7	14466	1.42	19	4.7	15.62	0.19	0.84	25.9	<0.2	75
610	537285	5481641	57.31	0.11	6.6	<2	7.72	14.8	64.9	14792	1.36	20	9.4	15.11	0.33	0.83	22.8	<0.2	71
611	538205	5481271	70.76	0.07	6.0	<2	4.60	7.7	44.5	4680	1.86	11	2.5	8.91	0.11	0.51	9.7	<0.2	48

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
612	538899	5481738	63.11	0.09	13.0	<2	6.75	10.1	63.4	14864	1.42	17	3.7	16.34	0.11	0.66	15.4	<0.2	80
613	538879	5479812	67.92	0.09	INF	INF	3.89	7.5	76.7	8342	2.20	18	2.4	14.32	0.09	0.97	11.3	<0.2	52
614	538438	5478942	48.86	0.10	INF	INF	5.90	12.2	54.2	10579	0.94	15	7.3	14.99	0.17	0.65	23.6	<0.2	77
615	538173	5478145	50.40	0.11	3.2	<2	7.62	15.5	69.1	11538	0.93	18	4.8	17.12	0.14	0.95	23.3	<0.2	74
616	538365	5477521	76.55	0.14	INF	INF	5.67	11.0	166.7	7065	2.63	25	2.3	19.26	0.19	1.04	10.0	<0.2	85
617	539449	5477818	64.81	0.07	2.8	<2	5.25	8.3	67.9	5928	1.67	14	3.5	12.66	0.10	0.46	9.7	<0.2	57
618	539373	5478531	57.85	0.07	INF	INF	5.19	10.6	57.4	10226	1.40	14	4.9	11.40	0.16	0.60	12.5	<0.2	63
619	539676	5479728	67.77	0.09	3.6	<2	6.66	7.9	74.7	11462	1.30	16	4.5	12.83	0.12	0.52	14.4	<0.2	69
620	540197	5480534	66.72	0.12	3.1	<2	6.99	15.1	87.8	11044	2.18	21	2.7	15.69	0.10	0.91	17.2	<0.2	71
621	540915	5479330	67.14	0.11	7.0	<2	4.36	6.1	68.9	20919	1.46	10	12.9	10.46	0.34	0.49	18.4	<0.2	80
623	541734	5478657	56.75	0.16	4.4	<2	11.66	17.6	123.1	42275	2.53	18	3.6	21.54	0.18	0.79	38.9	<0.2	116
624	541342	5478019	64.61	0.06	2.7	<2	4.25	9.2	44.1	4710	1.39	16	2.8	11.15	0.10	0.49	9.4	<0.2	55
625	541761	5477762	74.34	0.07	1.8	<2	2.91	5.5	23.8	7892	0.94	10	3.9	6.21	0.09	0.34	8.1	<0.2	65
629	543250	5475859	66.48	0.07	INF	INF	4.71	11.1	50.7	7009	1.15	16	3.6	13.75	0.13	0.75	17.0	<0.2	56
630	543688	5476303	67.14	0.08	INF	INF	6.88	12.0	83.4	10505	1.59	17	2.2	15.33	0.08	0.82	20.0	<0.2	60
631	542928	5476871	72.12	0.06	2.6	<2	5.74	11.9	48.3	6244	0.96	25	4.0	10.18	0.11	0.51	9.8	<0.2	62
632	542547	5476940	72.73	0.07	2.1	<2	9.58	20.5	41.7	25481	1.04	20	3.2	14.21	0.11	0.57	23.5	<0.2	82
634	542884	5478173	68.04	0.08	INF	INF	2.89	10.5	57.4	11340	1.77	12	2.9	15.73	0.08	0.61	13.5	<0.2	54
635	542719	5478781	68.09	0.08	INF	INF	8.08	9.0	72.5	12327	1.31	13	2.2	11.15	0.09	0.45	25.8	<0.2	61
636	542407	5479522	77.16	0.07	2.3	<2	4.87	9.1	66.7	12289	1.94	12	1.7	10.81	0.08	0.65	14.5	<0.2	61
637	541791	5479583	70.51	0.08	3.6	<2	3.56	6.9	57.0	10001	1.31	9	12.0	9.69	0.19	0.49	13.3	<0.2	45
638	544074	5478416	60.05	0.06	1.8	<2	5.48	17.5	50.4	10291	0.72	16	4.9	15.04	0.08	0.37	18.4	<0.2	54
639	544231	5477704	59.73	0.08	1.7	<2	6.21	9.5	64.4	13503	1.17	15	3.8	10.92	0.07	0.52	20.2	<0.2	60
640	543972	5476894	55.80	0.17	INF	INF	14.88	22.1	115.0	25217	1.16	25	6.2	27.68	0.15	0.97	48.5	<0.2	123
642	546369	5475963	66.75	0.19	3.6	<2	8.16	15.4	109.0	24379	3.33	25	3.9	20.48	0.14	1.18	42.5	<0.2	117
643	547546	5475896	63.43	0.09	1.4	<2	3.58	11.6	47.3	5323	1.44	8	2.9	15.11	0.06	0.55	6.5	<0.2	41
644	548161	5475567	31.25	0.09	1.6	<2	8.58	36.7	53.0	19642	1.72	29	4.6	21.22	0.07	0.79	30.8	<0.2	65
645	551851	5478573	25.76	0.15	2.1	<2	15.15	56.4	50.4	32944	15.20	45	10.4	63.59	0.10	2.75	58.9	<0.2	97
646	553552	5477714	32.43	0.10	1.9	<2	7.74	29.5	27.0	17614	5.17	32	5.9	44.51	0.09	3.88	34.8	<0.2	75
647	556439	5476727	46.69	0.35	1.7	<2	5.63	17.8	24.5	11032	3.71	15	8.4	78.12	0.11	4.99	31.8	<0.2	59
648	559365	5477785	29.28	0.16	0.6	<2	2.08	9.5	15.5	4803	1.74	7	4.3	26.08	0.04	2.92	10.5	<0.2	34
650	560543	5480580	50.66	0.12	1.7	<2	4.26	15.7	25.7	9704	4.79	14	7.0	46.16	0.10	10.57	21.7	<0.2	49
651	561269	5480310	41.11	0.13	2.1	<2	5.89	19.6	23.1	13688	1.50	16	7.5	97.91	0.10	13.51	30.8	<0.2	77
652	561946	5479481	51.45	0.26	4.6	<2	36.14	26.9	33.1	113351	2.47	22	9.0	95.93	0.14	11.10	59.3	<0.2	100
653	559992	5481214	35.64	0.06	1.1	<2	4.19	13.3	13.7	9118	1.09	11	4.6	43.25	0.05	4.53	16.2	<0.2	42
654	559761	5482588	28.87	0.12	1.2	<2	7.90	27.3	19.6	20090	1.19	22	6.5	47.61	0.06	3.54	42.5	<0.2	64
655	559681	5473685	41.37	0.15	1.8	<2	5.60	20.4	34.1	12040	2.73	14	4.3	72.37	0.11	4.44	27.7	<0.2	73
656	555457	5474851	46.59	0.14	1.8	<2	6.23	16.6	40.7	7411	2.07	22	4.6	70.86	0.09	3.39	21.2	0.5	49
657	552491	5477702	48.79	0.09	1.3	<2	2.23	7.7	21.2	3701	16.89	13	3.7	16.90	0.07	1.30	9.4	<0.2	45
658	547760	5481125	77.69	0.09	INF	INF	4.06	10.0	31.6	8532	1.40	11	2.6	16.20	0.09	0.76	12.0	<0.2	69
659	541154	5480211	58.00	0.09	4.3	4	5.38	10.2	60.4	11765	1.10	18	6.9	12.05	0.17	0.61	21.3	<0.2	57
660	540149	5478089	57.82	0.20	6.1	4	5.00	5.8	37.3	3282	1.50	13	3.0	9.58	0.12	0.51	8.2	<0.2	48
661	537132	5477460	51.29	0.35	11.0	5	12.17	20.0	75.2	21631	1.00	25	9.7	21.45	0.23	0.71	34.4	<0.2	77
662	534355	5478704	55.31	0.97	26.0	13	15.34	11.6	98.7	18671	1.32	21	5.3	21.02	0.35	0.72	27.3	<0.2	94
663	534011	5479610	74.00	0.36	12.0	6	8.95	8.9	58.8	15834	1.95	13	3.8	11.10	0.21	0.84	13.4	<0.2	86
664	532701	5479077	29.89	0.34	8.4	<2	15.61	34.0	66.5	26447	0.74	34	6.4	20.99	0.20	0.75	42.4	<0.2	83
665	531654	5479211	23.58	0.15	6.9	<2	13.41	33.3	53.7	25610	0.62	33	4.2	21.18	0.13	0.75	43.8	<0.2	75
666	530137	5479399	45.20	0.25	9.1	<2	9.84	18.1	41.9	16613	0.95	22	6.1	15.22	0.21	0.73	25.6	<0.2	65
667	528971	5478433	79.73	0.26	8.8	8	5.65	6.5	36.4	6219	1.18	10	2.3	9.96	0.17	0.66	9.7	<0.2	55
668	524999	5480880	12.32	0.12	11.0	8	18.25	41.2	38.1	32296	0.98	39	7.4	32.15	0.22	1.12	44.2	<0.2	76
669	523966	5481177	67.34	0.30	16.0	7	6.44	11.3	85.5	13209	1.38	16	3.0	10.71	0.34	0.58	13.2	<0.2	53

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
670	523704	5480108	65.45	0.52	INF	INF	7.33	10.3	27.3	5214	1.34	14	6.9	9.10	0.22	0.43	10.7	<0.2	63
672	517803	5477325	16.73	0.18	6.4	<2	16.76	54.7	40.1	37571	0.59	47	8.4	42.18	0.14	1.22	59.4	<0.2	91
674	514709	5478255	62.02	0.32	5.1	<2	8.06	18.7	56.7	13091	3.37	22	3.3	73.75	0.20	1.27	29.7	<0.2	67
675	514069	5477628	50.06	0.35	7.0	<2	9.88	24.4	62.7	20229	3.18	30	4.7	69.96	0.17	1.17	44.2	<0.2	82
676	513220	5476829	36.84	0.35	6.0	<2	12.04	39.0	80.8	20493	3.36	41	5.7	102.62	0.18	1.64	47.1	<0.2	92
677	511498	5477400	53.97	0.44	9.0	6	18.19	25.7	47.4	22507	3.08	26	4.5	94.56	0.19	1.71	37.4	<0.2	75
678	508896	5477170	30.06	0.95	7.4	<2	17.91	39.1	31.5	22847	0.91	49	6.3	103.19	0.11	2.88	36.5	<0.2	119
679	508316	5476445	49.01	0.20	7.5	<2	10.29	25.1	33.6	16762	2.51	33	6.2	35.96	0.19	4.70	25.3	<0.2	60
680	507725	5476392	36.95	0.30	5.3	<2	16.89	43.8	37.8	31008	1.09	51	7.8	96.03	0.10	4.27	54.3	<0.2	122
681	506361	5475693	23.54	0.22	4.4	<2	13.96	43.9	43.7	23440	2.57	41	7.1	55.71	0.12	2.45	39.9	<0.2	89
683	507709	5475349	44.81	0.25	5.1	<2	9.53	23.1	27.4	14883	1.10	30	5.1	73.45	0.13	3.67	25.9	<0.2	70
684	508730	5474613	47.85	0.42	7.1	5	15.83	31.7	51.2	15047	3.41	40	4.4	91.68	0.18	2.40	32.3	<0.2	89
685	508244	5473929	35.69	0.34	7.1	5	11.22	27.2	32.2	16388	4.36	31	5.5	50.64	0.18	2.57	37.5	0.3	73
686	507668	5473794	42.62	0.25	7.4	<2	14.89	39.4	43.3	19672	2.95	41	6.9	79.89	0.17	2.92	36.9	<0.2	91
687	506778	5473846	47.31	0.26	6.2	5	11.37	31.0	40.6	16645	2.40	37	6.8	79.18	0.14	3.39	29.4	<0.2	72
688	506706	5473174	50.09	0.21	4.6	<2	9.48	26.4	43.9	18529	3.33	27	10.4	54.37	0.21	2.45	48.9	<0.2	63
689	506221	5473242	45.38	0.28	5.7	<2	13.12	44.8	48.5	24068	2.98	40	8.7	73.47	0.18	6.85	41.7	<0.2	81
690	505334	5473352	32.02	0.19	3.9	<2	12.19	37.8	41.0	25498	2.88	35	9.1	68.14	0.15	2.28	49.8	<0.2	93
692	503633	5473769	38.06	0.37	4.6	<2	17.48	36.9	40.3	19963	2.77	35	5.4	116.66	0.11	3.19	41.3	<0.2	115
693	505623	5472982	22.39	0.08	INF	INF	11.33	20.1	24.7	15075	3.51	26	4.2	34.14	0.11	1.53	27.6	<0.2	58
694	505754	5472508	45.44	0.18	4.8	<2	10.62	25.4	40.0	9728	2.05	33	4.0	76.72	0.10	1.57	18.9	<0.2	80
695	505746	5471703	36.54	0.17	4.4	<2	22.07	31.5	42.9	21033	2.90	40	3.3	102.97	0.10	1.99	34.5	<0.2	111
696	505946	5471147	46.40	0.19	INF	INF	12.40	32.3	48.9	15237	4.12	28	6.2	68.81	0.14	1.39	39.4	<0.2	75
697	505025	5471387	46.76	0.19	3.8	<2	13.99	30.6	43.3	16851	2.41	30	5.2	85.27	0.11	1.53	38.1	<0.2	78
698	504640	5470815	45.85	0.18	3.7	<2	7.89	22.4	31.5	9688	1.87	21	3.8	41.25	0.09	1.22	18.9	<0.2	73
699	504130	5470021	63.49	0.18	3.7	<2	5.66	11.2	39.9	9636	4.28	13	3.1	35.99	0.10	0.87	23.1	<0.2	71
700	503790	5471178	48.91	0.30	5.1	<2	7.60	18.5	38.9	10482	3.27	20	3.8	67.19	0.16	1.44	26.8	<0.2	60
701	503418	5470482	51.56	0.23	8.7	4	17.43	18.2	44.9	15222	6.15	24	3.8	38.15	0.22	1.84	30.7	<0.2	87
702	502725	5470489	33.67	0.21	3.8	<2	14.96	27.3	31.6	19555	2.60	27	4.9	63.88	0.09	1.19	35.2	<0.2	91
703	502498	5469583	52.30	0.16	5.6	<2	12.20	25.7	50.0	14660	4.86	46	5.2	99.69	0.15	2.54	24.0	<0.2	85
704	501441	5469374	40.36	0.23	3.7	<2	9.61	32.3	41.6	19021	7.23	27	6.5	78.22	0.16	2.30	39.7	<0.2	84
705	500115	5469927	47.40	0.10	2.0	<2	8.16	20.2	22.2	8259	0.91	23	3.8	60.76	0.07	1.17	12.2	<0.2	61
706	501292	5470287	31.55	0.12	2.4	<2	11.69	36.3	32.8	21767	3.60	30	5.7	63.33	0.10	1.55	35.2	<0.2	86
707	501993	5471280	36.47	0.17	3.3	<2	7.56	40.3	42.9	18667	8.63	25	4.9	80.73	0.11	2.44	34.5	<0.2	97
708	501655	5472258	35.63	0.14	6.2	<2	16.02	26.6	34.7	19515	5.87	35	4.8	45.63	0.18	2.26	35.8	<0.2	91
709	501605	5472982	34.90	0.14	2.9	<2	14.47	38.5	30.5	23454	2.40	35	5.5	78.17	0.08	1.53	38.9	<0.2	119
710	502236	5475401	39.76	0.12	3.1	<2	13.20	36.5	30.7	19499	1.65	40	6.4	63.17	0.07	1.82	33.6	<0.2	105
711	504532	5475745	50.63	0.16	1.7	<2	5.33	20.4	38.1	10248	3.03	18	5.3	49.50	0.11	1.88	24.5	<0.2	49
712	504895	5476553	37.01	0.14	4.4	<2	13.59	46.9	35.8	23790	1.89	44	9.9	63.47	0.11	2.03	43.6	<0.2	111
713	505573	5477361	32.81	0.18	3.8	<2	16.20	54.7	34.7	28713	1.35	51	8.8	70.28	0.08	2.15	47.3	<0.2	132
714	503653	5477261	33.12	0.46	5.0	10	16.66	52.1	37.2	29012	1.77	52	8.5	71.92	0.10	2.25	51.1	<0.2	141
715	502632	5480820	47.00	0.11	4.3	<2	10.63	33.8	26.1	16519	2.15	40	6.2	39.66	0.13	1.90	38.8	<0.2	115
758	500503	5476667	44.36	0.07	INF	INF	6.18	20.1	17.1	10520	1.72	22	5.8	27.09	0.10	1.09	17.6	<0.2	58
759	502579	5476380	82.39	0.06	4.2	<2	7.35	12.9	13.6	11365	2.34	15	4.3	23.32	0.13	0.97	12.4	<0.2	32
761	533398	5478269	72.54	0.09	INF	INF	8.29	83.7	94.8	13982	1.96	38	3.8	17.80	0.16	0.75	24.4	<0.2	66
763	550347	5474395	14.50	0.07	1.0	<2	5.70	20.7	29.6	13859	0.73	18	5.4	23.42	0.07	1.08	24.2	0.4	48
765	540794	5476099	69.14	0.06	2.4	<2	4.59	8.9	53.2	8372	2.21	16	2.3	12.51	0.08	0.71	11.7	<0.2	75
766	539279	5476692	25.04	0.08	2.8	<2	13.74	28.6	50.5	25791	1.23	28	3.3	16.72	0.13	0.80	43.8	<0.2	76
767	536304	5477928	52.19	0.09	3.6	<2	7.45	13.3	67.6	12898	1.18	18	4.9	13.57	0.17	0.70	19.2	<0.2	75
768	533662	5477812	54.74	0.25	14.0	<2	11.49	18.2	118.5	11893	1.69	27	3.1	21.46	0.23	0.94	22.1	<0.2	78
769	530138	5476744	65.16	0.11	10.0	<2	7.72	11.6	75.0	13434	2.16	22	2.7	14.13	0.16	1.01	13.2	<0.2	90

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
770	526937	5476725	60.94	0.08	INF	INF	6.18	13.5	47.2	11050	1.50	17	3.8	13.84	0.25	0.73	19.0	<0.2	56
771	524344	5476249	70.52	0.10	6.6	3	5.59	8.3	42.7	10649	3.66	9	2.2	9.28	0.32	0.73	10.0	<0.2	52
773	517462	5475770	10.59	0.17	7.0	<2	16.12	53.9	39.8	38227	0.65	44	9.3	38.01	0.19	1.33	57.0	<0.2	89
776	512758	5476039	29.18	0.20	6.0	<2	14.80	49.7	66.5	33048	3.31	45	6.2	102.91	0.16	2.29	59.0	0.4	118
777	511811	5475703	28.57	0.17	7.5	<2	24.89	48.9	63.3	37424	3.61	59	8.1	75.83	0.21	1.96	51.0	0.3	115
778	512037	5474815	39.78	0.24	3.1	<2	9.19	34.2	57.3	15499	0.92	44	5.0	69.60	0.12	1.61	26.3	<0.2	70
779	510845	5475059	30.51	0.19	6.0	<2	12.07	41.1	65.6	29186	3.61	43	8.2	95.26	0.19	1.95	54.4	0.2	84
780	510986	5474085	26.93	0.19	3.6	<2	12.26	43.0	60.6	23094	1.82	47	6.5	66.81	0.13	2.00	40.5	<0.2	77
783	510203	5473882	21.47	0.18	5.9	<2	16.05	53.0	40.4	39280	3.70	44	7.5	70.12	0.12	1.99	54.8	<0.2	105
784	509534	5473160	20.32	0.17	5.0	<2	18.74	48.3	39.1	42855	3.95	41	8.0	71.07	0.13	1.88	61.6	<0.2	102
785	509583	5472035	61.29	0.13	3.8	<2	4.91	15.9	62.9	7387	2.31	29	3.8	40.51	0.18	1.11	14.7	0.3	62
786	509281	5471463	62.99	0.10	2.9	<2	4.09	12.0	40.5	4693	1.48	27	3.8	30.72	0.13	0.78	11.9	0.3	45
787	508538	5472305	32.81	0.18	3.0	<2	16.95	39.4	45.2	22394	2.32	36	5.6	72.62	0.13	1.68	42.7	<0.2	102
788	507902	5472206	37.88	0.18	2.4	<2	15.24	34.6	46.8	14103	2.52	21	6.9	70.29	0.14	1.58	31.9	<0.2	74
789	506970	5472156	48.49	0.32	4.0	<2	17.77	28.7	52.2	28389	3.72	33	6.7	92.49	0.15	1.32	72.8	<0.2	79
790	507552	5471644	40.73	0.21	INF	INF	20.76	32.3	46.9	28948	3.34	30	8.1	72.24	0.16	1.36	66.8	<0.2	79
791	507320	5470215	46.75	0.22	3.3	<2	10.88	29.0	54.9	12125	3.13	25	6.3	70.13	0.15	1.20	37.2	<0.2	79
792	505718	5469486	48.86	0.08	1.9	<2	2.58	11.7	24.8	3713	1.46	13	2.6	20.11	0.10	0.78	7.9	<0.2	26
793	505876	5468876	25.59	0.09	2.7	<2	9.14	25.5	36.7	17883	0.88	34	3.6	52.14	0.09	1.45	23.0	<0.2	68
794	506285	5468460	26.87	0.11	3.5	<2	11.04	37.5	45.9	21653	1.40	32	4.4	63.61	0.11	1.42	35.8	<0.2	81
795	504851	5468068	52.70	0.22	4.2	<2	10.29	24.7	43.7	16145	3.52	26	6.3	64.85	0.15	1.33	62.7	<0.2	70
796	504388	5466738	57.60	0.14	3.2	<2	9.96	19.9	40.0	8911	2.47	22	4.1	40.70	0.14	0.94	29.5	<0.2	65
797	504810	5466051	45.16	0.17	3.7	<2	18.76	34.9	71.8	16001	2.23	39	4.3	71.99	0.10	1.18	30.5	<0.2	82
798	505179	5466747	38.40	0.14	3.2	<2	10.06	34.6	58.7	16387	1.58	31	5.5	61.04	0.13	1.40	30.4	<0.2	80
799	505571	5467600	27.92	0.12	3.5	<2	14.63	40.3	50.8	29752	2.18	39	4.6	69.64	0.12	1.60	39.6	<0.2	106
800	506443	5466864	46.50	0.27	5.9	<2	25.40	35.1	68.8	31004	3.64	34	7.2	84.70	0.20	1.11	52.6	0.4	101
801	506053	5465508	64.59	0.17	INF	INF	8.32	22.8	72.6	10209	7.76	33	4.6	76.56	0.14	2.35	23.8	0.3	81
802	505385	5464929	43.15	0.26	3.4	<2	12.39	32.2	118.4	18163	4.16	39	3.8	96.45	0.18	1.68	31.5	<0.2	87
803	504790	5464287	46.12	0.25	4.1	<2	14.16	28.9	131.4	18139	5.29	44	3.2	120.56	0.20	1.90	33.3	<0.2	99
804	506746	5463895	70.29	0.08	2.3	<2	3.88	9.8	48.7	6157	1.74	18	3.3	17.80	0.12	0.61	15.5	<0.2	52
805	507617	5463992	39.57	0.11	4.0	<2	9.61	29.8	71.9	21124	1.31	36	7.2	30.27	0.21	1.06	50.2	<0.2	78
812	500209	5462016	25.68	0.27	6.4	<2	22.99	40.5	34.1	56532	17.47	41	11.3	109.84	0.15	23.89	57.6	0.4	136
814	502240	5463372	18.39	0.09	1.6	<2	12.07	29.7	19.5	18001	2.55	28	4.6	57.57	0.06	4.16	25.9	<0.2	89
815	501266	5463766	30.64	0.20	3.6	<2	14.88	35.4	30.8	22238	4.79	29	13.6	74.48	0.19	5.28	59.4	<0.2	96
816	502256	5464466	26.26	0.14	2.2	<2	15.49	43.8	29.5	27941	2.95	42	7.4	71.57	0.10	4.15	47.6	<0.2	116
817	502119	5466866	25.97	0.09	1.5	<2	12.05	30.7	19.4	14440	1.97	30	4.3	44.13	0.05	1.56	23.7	<0.2	81
818	502804	5467354	33.40	0.19	3.7	<2	14.85	38.2	40.7	18565	4.94	28	5.6	78.63	0.13	2.02	47.3	<0.2	95
819	502203	5468482	41.37	0.14	2.2	<2	10.63	31.5	42.4	17902	7.99	30	4.8	73.71	0.13	2.52	30.3	<0.2	83
820	500224	5468503	21.95	0.10	1.4	<2	11.10	26.7	22.4	17825	3.35	27	3.8	63.58	0.07	1.73	23.8	<0.2	75
864	527499	5476414	57.29	0.10	INF	INF	6.74	12.1	59.3	7634	0.89	17	3.0	15.03	0.11	0.92	14.8	<0.2	62
865	534839	5476919	66.61	0.07	3.6	<2	4.70	8.1	64.3	11195	1.38	14	4.4	9.69	0.13	0.60	15.5	<0.2	57
866	537297	5476757	52.19	0.07	1.9	<2	5.93	12.3	49.4	4547	0.70	16	2.4	18.94	0.07	0.62	11.2	<0.2	46
867	538779	5476895	51.33	0.13	3.5	<2	7.44	16.2	104.4	11165	1.32	32	4.2	26.59	0.11	0.97	25.2	<0.2	94
868	539586	5476409	64.05	0.07	4.1	<2	7.37	14.1	90.5	9863	1.37	23	2.4	13.28	0.13	0.76	14.1	<0.2	67
869	540042	5476639	72.77	0.05	INF	INF	4.48	9.0	52.0	6172	2.24	26	2.1	8.89	0.08	0.46	7.2	<0.2	70
870	548598	5474968	32.72	0.18	INF	INF	10.00	32.3	60.6	21276	1.27	33	8.7	28.83	0.12	1.37	44.1	<0.2	79
871	545161	5474605	41.92	0.16	INF	INF	9.72	24.8	87.7	21229	5.19	28	6.0	28.59	0.10	1.82	35.3	<0.2	86
872	544880	5471808	55.93	0.13	3.2	<2	7.07	28.3	44.8	14086	1.74	33	5.6	27.76	0.11	0.84	19.4	<0.2	71
873	543946	5470297	59.72	0.23	INF	INF	5.62	17.4	56.3	9362	15.75	20	3.2	38.43	0.15	1.37	17.6	<0.2	69
874	545155	5469189	53.34	0.09	2.3	<2	5.12	19.3	42.1	6636	0.93	17	3.4	17.64	0.08	0.53	13.3	<0.2	61
875	544081	5468663	62.80	0.09	2.3	<2	4.39	12.6	54.0	4959	1.11	16	2.8	16.11	0.10	0.61	11.9	<0.2	55

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	--------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	--------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	--------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
876	545624	5467119	69.46	0.09	1.9	<2	6.47	17.7	65.5	7710	2.20	16	1.8	17.72	0.12	0.93	18.9	<0.2	69
877	543558	5465962	69.82	0.10	INF	INF	7.44	14.7	64.2	8890	2.56	19	3.2	18.71	0.14	0.72	17.2	<0.2	78
878	541348	5465732	51.66	0.06	1.9	<2	4.46	13.6	32.9	6415	0.82	20	2.9	21.42	0.05	0.41	17.4	<0.2	43
879	540233	5465481	69.27	0.10	INF	INF	6.34	22.6	63.5	13037	1.77	31	1.9	25.00	0.09	0.72	15.7	<0.2	68
880	539332	5465532	53.69	0.07	2.1	<2	5.25	17.6	48.5	4287	0.95	38	4.2	20.18	0.07	0.53	11.8	<0.2	44
881	538137	5465965	67.19	0.10	2.0	<2	4.97	16.9	59.5	9550	1.39	32	2.8	15.16	0.14	0.53	17.3	<0.2	56
882	535649	5465130	57.15	0.16	3.9	<2	19.26	28.8	80.1	11834	3.50	41	6.7	34.76	0.19	0.84	31.3	<0.2	112
883	534385	5464385	43.80	0.21	3.0	<2	21.86	35.6	46.7	19966	2.12	28	8.5	37.17	0.10	0.88	55.9	<0.2	65
884	531036	5466170	20.30	0.24	1.7	38	14.48	41.6	54.5	23621	2.56	42	4.6	55.57	0.07	2.20	37.0	<0.2	96
885	530763	5465343	27.61	0.35	2.3	<2	15.29	43.9	75.7	26381	3.24	41	7.6	68.33	0.11	2.06	46.3	0.2	104
886	529924	5463856	21.42	0.19	1.5	<2	15.18	48.7	37.4	24637	1.30	34	7.4	44.85	0.08	1.94	40.1	<0.2	88
887	528753	5463222	26.82	0.20	INF	INF	20.02	51.5	43.5	24140	0.83	41	9.7	65.52	0.09	1.83	44.2	<0.2	100
888	527926	5462507	24.65	0.12	2.5	<2	15.64	39.5	31.2	24345	0.61	42	6.8	47.44	0.07	1.51	44.3	<0.2	97
889	525109	5462535	59.80	0.11	1.8	<2	10.53	14.4	62.9	12664	1.41	25	3.6	47.31	0.10	0.65	35.5	<0.2	71
890	523657	5462203	50.58	0.08	1.6	<2	4.15	15.1	34.7	5014	0.72	16	3.4	34.98	0.10	0.69	14.6	<0.2	35
891	522914	5461612	54.19	0.16	3.2	<2	7.79	29.1	82.7	10620	2.49	31	5.7	108.80	0.22	1.64	19.2	<0.2	62
892	522157	5459507	59.28	0.22	3.2	6	9.74	28.5	89.5	14175	2.82	33	3.5	116.26	0.13	1.85	31.5	<0.2	89
893	522207	5458443	35.70	0.28	6.2	<2	26.67	44.0	67.6	73783	3.89	43	9.4	133.68	0.17	5.21	51.7	0.2	121
894	521063	5459504	31.76	0.13	2.3	<2	5.73	29.0	46.4	10411	1.04	27	4.4	74.11	0.11	2.84	16.8	<0.2	59
895	520272	5459274	58.64	0.10	INF	INF	8.42	21.3	53.6	14064	1.68	30	3.2	64.46	0.16	1.92	26.4	<0.2	57
896	519666	5459857	38.79	0.25	5.0	<2	10.41	39.3	57.3	24626	1.96	28	14.7	92.46	0.23	2.73	43.9	<0.2	85
897	518866	5459779	50.91	0.10	2.8	<2	6.92	18.0	34.8	12895	1.16	18	6.0	27.10	0.10	0.57	33.9	<0.2	60
898	518346	5460096	57.48	0.12	6.7	4	6.54	17.0	38.0	10766	0.98	20	5.0	33.18	0.14	0.69	29.5	<0.2	53
899	517844	5459974	57.85	0.17	INF	INF	9.81	20.3	57.1	8217	1.39	33	4.2	43.75	0.18	1.19	24.5	<0.2	80
900	516137	5461072	44.22	0.06	2.7	<2	4.88	12.4	32.9	4455	0.49	16	7.2	18.48	0.11	0.53	9.0	<0.2	38
901	513339	5460665	75.06	0.07	INF	INF	3.75	7.8	59.2	2740	1.12	12	1.5	8.17	0.09	0.47	5.8	<0.2	42
902	512225	5460888	64.38	0.14	4.4	<2	6.25	30.7	60.9	8463	2.81	27	4.0	27.69	0.23	1.84	16.5	<0.2	59
910	513000	5461725	71.37	0.08	2.9	4	3.63	12.9	55.8	7567	2.41	25	2.5	16.54	0.13	0.95	9.8	<0.2	53
911	513502	5461311	54.25	0.11	3.9	5	7.96	24.6	60.1	11772	1.11	31	4.4	24.08	0.14	0.75	16.5	<0.2	70
912	514701	5462179	64.80	0.11	4.1	<2	5.41	18.8	46.3	7270	1.73	21	3.9	33.62	0.19	0.97	19.3	<0.2	64
913	515609	5462325	49.69	0.11	2.8	<2	5.56	13.4	38.4	3880	1.15	18	4.6	26.38	0.13	0.69	10.7	<0.2	44
914	517076	5461880	50.77	0.13	2.0	<2	7.42	19.2	44.1	9980	1.25	22	4.1	34.59	0.10	0.79	28.1	<0.2	43
915	517518	5461731	58.99	0.10	2.0	<2	11.17	20.7	50.2	5839	2.95	37	4.3	49.57	0.14	1.16	13.1	<0.2	53
916	518184	5460715	57.04	0.15	3.7	<2	9.99	20.7	46.6	11054	1.26	22	4.7	42.24	0.16	0.94	39.1	<0.2	67
917	519427	5461193	24.86	0.14	4.4	<2	12.72	39.9	45.5	23083	1.58	31	5.4	80.88	0.12	3.76	30.5	<0.2	89
919	522154	5462581	48.11	0.13	2.0	<2	4.73	18.7	35.1	9068	1.05	19	3.9	24.97	0.11	0.68	24.8	0.2	58
920	525642	5463776	60.66	0.10	2.9	<2	6.72	20.5	57.7	5242	0.94	36	7.7	64.02	0.15	1.01	14.1	<0.2	38
921	525730	5464101	70.57	0.08	3.0	<2	13.96	37.0	77.2	26653	2.00	54	3.0	49.72	0.15	1.13	20.4	<0.2	96
922	525508	5464341	62.93	0.12	INF	INF	10.75	25.9	75.9	9763	1.40	32	4.1	44.35	0.08	1.11	18.1	<0.2	67
924	527255	5465032	56.03	0.08	2.5	<2	15.80	33.7	59.7	33493	1.87	44	2.9	48.22	0.10	0.98	29.7	<0.2	110
925	528792	5465928	56.81	0.14	3.0	<2	7.84	21.5	48.2	17787	1.00	35	4.5	49.49	0.11	0.77	37.5	<0.2	71
926	559530	5476674	27.34	0.07	0.7	<2	1.91	7.3	12.9	2785	2.65	7	2.9	18.60	0.05	2.10	6.0	<0.2	23
927	553774	5475305	57.34	0.22	INF	INF	9.36	21.3	58.3	22000	17.36	26	5.4	43.81	0.09	1.60	37.6	0.6	96
928	543323	5471712	34.36	0.22	4.0	<2	12.93	58.2	64.5	29589	2.84	45	7.8	51.15	0.12	1.88	47.8	<0.2	118
929	543080	5470566	60.15	0.20	INF	INF	4.98	18.5	47.4	8703	24.50	18	3.6	33.39	0.12	1.16	19.7	<0.2	61
930	541518	5470272	61.89	0.11	2.7	<2	6.38	19.9	92.3	8187	1.82	20	3.2	19.78	0.14	0.87	15.6	<0.2	56
931	541873	5468847	71.48	0.10	1.9	<2	2.98	13.9	99.7	9651	2.38	26	2.0	21.17	0.08	0.71	6.8	<0.2	49
932	539892	5466632	58.68	0.07	2.1	<2	4.78	13.0	48.9	3320	1.26	30	2.9	12.58	0.08	0.50	7.0	<0.2	44
933	537811	5466996	67.04	0.08	INF	INF	5.92	12.0	34.3	7256	0.84	22	5.5	15.86	0.11	0.56	9.5	<0.2	49
934	531021	5466897	43.97	0.48	3.0	<2	11.72	43.6	125.9	18963	4.09	43	9.3	85.40	0.17	2.13	35.7	0.2	94
935	530489	5467091	13.62	0.15	2.4	9	11.96	34.5	50.0	18982	3.16	37	3.0	45.02	0.05	1.64	25.1	<0.2	77

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
936	528706	5466659	48.36	0.18	4.0	<2	9.00	23.0	81.2	10834	3.93	37	4.0	57.53	0.18	1.17	22.6	<0.2	75
937	528226	5466538	64.08	0.20	4.3	<2	8.82	19.3	59.5	14578	3.10	26	4.3	51.49	0.16	0.86	30.5	<0.2	76
938	527723	5465788	57.03	0.14	3.3	<2	12.72	29.8	66.1	21778	1.46	28	7.3	62.15	0.20	0.80	52.1	<0.2	71
939	527059	5465546	58.34	0.12	3.2	<2	9.42	24.3	61.2	16430	1.40	22	6.2	50.97	0.16	0.69	42.7	<0.2	62
940	526169	5466164	49.77	0.11	INF	INF	8.60	24.9	47.5	26116	1.52	31	3.3	73.28	0.12	9.43	27.8	<0.2	79
941	525944	5466739	50.30	0.13	4.0	<2	9.73	30.6	54.0	11965	1.61	32	5.4	77.69	0.17	9.58	25.7	<0.2	66
942	525140	5466145	41.11	0.12	2.5	<2	8.57	23.9	39.2	16628	1.70	20	5.6	42.86	0.11	1.49	32.1	<0.2	60
943	522437	5464790	34.44	0.28	7.1	7	17.44	35.7	78.7	39327	2.54	48	5.7	90.62	0.19	2.03	43.5	0.2	116
944	521170	5465687	59.32	0.10	3.4	<2	7.91	22.0	42.9	8046	1.24	17	3.3	30.51	0.15	0.86	22.7	<0.2	54
945	519959	5465040	59.61	0.14	3.4	<2	7.93	17.5	61.7	14920	1.55	19	4.3	36.38	0.17	0.75	39.2	<0.2	69
946	519453	5465724	47.11	0.05	1.6	<2	3.28	8.9	18.9	3567	1.22	14	2.0	9.95	0.08	0.44	8.0	<0.2	42
947	518461	5465372	55.08	0.13	INF	INF	6.42	17.5	37.1	6233	1.73	23	4.1	60.80	0.15	4.52	19.9	<0.2	46
948	518379	5464730	24.14	0.13	INF	INF	9.26	27.6	36.9	16189	1.24	33	4.0	55.83	0.10	3.18	26.7	<0.2	66
950	519358	5463172	38.88	0.21	3.0	<2	8.42	37.7	52.0	16168	1.56	30	6.9	79.59	0.12	2.83	29.4	<0.2	74
951	520455	5462616	46.60	0.16	2.2	<2	10.38	23.5	46.4	14292	3.41	23	4.7	46.28	0.12	1.54	38.1	<0.2	63
952	519569	5462199	48.18	0.15	5.2	<2	10.62	20.7	67.6	17813	4.10	39	4.8	29.91	0.23	4.99	23.9	0.2	76
953	518872	5462117	41.41	0.21	3.6	<2	8.89	33.9	51.7	21249	1.33	34	9.3	79.99	0.17	2.79	40.8	<0.2	82
954	517984	5463420	56.46	0.17	INF	INF	8.29	27.1	60.3	12114	2.23	51	5.1	70.44	0.13	3.27	15.1	0.2	69
955	518233	5464108	34.15	0.14	2.5	<2	8.30	32.9	44.1	15001	1.21	29	7.0	64.50	0.16	2.74	28.8	<0.2	71
956	516985	5463553	58.84	0.13	5.0	<2	5.67	21.2	58.1	18287	4.98	45	4.3	41.33	0.16	3.33	20.3	0.2	52
957	516085	5462841	70.91	0.10	3.0	<2	7.12	17.3	45.5	7053	2.07	47	4.5	43.68	0.10	2.59	8.3	<0.2	63
959	514845	5462809	36.24	0.17	4.0	<2	12.05	43.5	68.3	18237	1.75	33	5.7	50.49	0.17	1.49	36.8	0.2	87
960	513859	5462183	64.26	0.12	3.4	<2	4.85	16.1	55.3	8520	2.56	17	3.9	19.02	0.21	1.23	12.5	<0.2	55
961	513088	5462961	71.50	0.11	INF	INF	5.14	21.0	69.2	11782	2.96	39	3.0	36.48	0.14	1.97	11.6	<0.2	61
963	511347	5462024	36.59	0.13	13.0	<2	12.31	36.6	40.0	24088	1.97	37	7.8	36.97	0.40	1.24	41.2	<0.2	85
974	513531	5463528	42.11	0.20	5.6	<2	11.10	49.8	55.8	22790	1.52	38	10.7	66.45	0.29	2.89	48.8	0.2	92
975	514505	5463678	50.57	0.13	2.6	4	10.32	29.2	55.7	10918	1.75	39	4.8	63.30	0.14	3.71	18.6	<0.2	68
976	514283	5464366	37.15	0.18	3.7	<2	15.68	35.4	39.1	22719	1.29	26	8.9	63.40	0.15	2.55	46.6	<0.2	77
977	516988	5465472	58.33	0.27	INF	INF	6.42	19.4	34.4	13991	3.07	17	4.7	96.36	0.15	7.00	36.4	<0.2	66
978	517136	5467052	27.66	0.25	5.0	<2	9.02	46.3	55.1	20884	2.03	31	7.4	64.05	0.19	8.97	35.9	0.2	75
980	549368	5474684	37.14	0.14	1.8	<2	11.39	36.6	72.5	21008	1.63	29	7.2	29.62	0.13	1.47	39.1	<0.2	73
981	540382	5467297	71.80	0.11	INF	INF	7.75	20.8	83.0	9921	2.55	33	2.1	18.23	0.08	0.92	10.8	<0.2	72
982	538811	5467230	45.58	0.08	2.9	<2	8.50	25.2	52.8	12796	1.11	27	4.6	17.81	0.12	0.82	18.6	<0.2	62
983	535857	5468573	58.07	0.36	2.8	6	5.58	29.7	403.6	12975	49.85	68	3.1	54.16	0.36	1.88	15.5	0.4	73
984	534588	5468711	31.65	0.69	2.9	9	9.56	42.0	171.5	18744	15.56	36	6.3	43.14	0.22	1.43	29.4	0.2	76
985	532508	5468220	58.30	0.20	2.2	<2	8.28	11.7	76.0	8946	5.35	22	3.1	19.70	0.18	0.91	9.6	0.5	73
986	532150	5467593	36.11	0.27	5.7	<2	16.53	41.2	87.9	26620	7.59	35	7.3	67.53	0.16	7.36	46.8	0.2	110
987	531485	5467678	48.47	0.21	2.5	5	8.24	30.6	76.4	11345	4.30	37	5.4	42.36	0.19	4.50	20.8	<0.2	71
988	529531	5468077	35.53	0.19	2.9	<2	13.85	56.0	86.2	31894	1.60	48	4.8	111.40	0.12	3.18	44.6	<0.2	100
989	528761	5467574	49.70	0.26	2.8	6	9.84	40.1	85.2	15410	1.52	36	6.3	92.51	0.15	1.83	37.2	<0.2	63
993	518738	5468327	56.85	0.10	4.2	<2	4.04	21.2	72.6	8217	4.28	41	4.5	42.44	0.22	5.45	13.8	0.2	56
994	517374	5468138	58.86	0.09	4.8	4	4.60	16.8	43.1	9058	4.02	25	8.6	24.61	0.39	3.33	16.4	<0.2	52
995	517076	5467523	66.26	0.10	4.1	<2	3.26	18.8	46.5	11936	3.81	30	4.4	30.88	0.24	2.67	17.5	<0.2	50
996	516394	5467701	25.96	0.18	4.4	<2	9.68	49.3	49.0	21950	1.63	37	6.5	53.69	0.17	6.47	37.3	<0.2	77
997	515509	5466632	28.38	0.23	6.6	<2	14.68	46.9	60.3	33176	3.73	46	8.0	79.52	0.20	11.00	50.6	0.4	110
1000	512367	5465997	35.04	0.13	14.0	<2	9.61	32.1	49.3	28630	1.61	29	6.7	26.17	0.62	0.83	33.0	<0.2	72
1002	510310	5465431	71.45	0.09	4.5	<2	8.94	11.8	44.8	8152	1.08	21	3.6	9.30	0.17	0.40	16.3	<0.2	52
1003	509816	5465315	65.54	0.07	4.0	5	3.20	9.3	48.0	4932	1.85	17	3.0	9.87	0.13	0.62	8.1	<0.2	47
1004	508438	5465068	79.66	0.07	2.7	<2	3.66	7.5	24.8	2297	0.91	14	3.3	7.18	0.09	0.34	6.3	<0.2	40
1005	509109	5465896	65.77	0.09	4.1	<2	7.88	23.2	75.6	9468	1.45	35	3.1	12.86	0.17	0.73	16.7	<0.2	69
1006	508820	5466513	63.99	0.07	2.7	<2	5.16	13.4	39.4	7229	2.25	17	2.6	12.78	0.10	0.64	15.4	<0.2	53

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
1007	508370	5467582	61.86	0.16	3.4	<2	15.04	21.0	87.1	18036	1.80	28	3.1	28.57	0.20	0.81	43.4	<0.2	120
1008	510122	5468897	51.42	0.08	2.1	<2	8.00	19.0	40.1	12099	0.96	21	3.6	16.42	0.11	0.55	23.9	<0.2	69
1009	509219	5467669	73.02	0.08	2.2	<2	4.97	12.8	43.9	6431	1.76	23	2.2	10.97	0.08	0.47	7.3	<0.2	55
1010	509609	5467518	66.94	0.11	3.9	<2	6.58	14.3	49.1	11219	1.43	25	3.1	18.51	0.14	0.57	21.0	<0.2	76
1011	510428	5467537	66.18	0.09	3.2	<2	5.79	12.8	64.8	5818	1.35	26	3.0	14.33	0.15	0.55	12.4	<0.2	50
1013	511936	5467122	18.45	0.15	8.0	<2	14.54	48.2	58.7	27015	1.45	49	11.7	43.93	0.33	3.33	55.2	<0.2	119
1014	512975	5466966	52.25	0.09	4.8	<2	6.75	24.8	32.0	11092	1.52	22	5.5	17.39	0.17	0.90	15.7	<0.2	50
1015	512820	5467458	77.91	0.09	4.5	<2	2.68	9.7	30.9	4938	1.33	14	2.3	10.56	0.18	0.60	9.5	<0.2	43
1017	515405	5467502	42.81	0.13	7.8	<2	8.50	26.6	48.7	22798	3.08	31	6.2	39.98	0.43	2.38	31.1	0.3	62
1019	517008	5468600	64.59	0.15	7.6	<2	5.77	13.5	49.7	7301	2.27	35	4.8	33.89	0.77	2.54	10.7	<0.2	57
1021	519698	5469581	15.68	0.13	4.1	<2	14.66	52.4	39.3	39058	0.76	50	9.0	38.87	0.16	2.99	57.1	<0.2	95
1023	524182	5469456	29.65	0.13	4.5	<2	14.81	37.9	41.9	25721	10.04	31	6.8	58.69	0.18	17.27	36.9	0.3	73
1024	527470	5468895	33.94	0.13	4.6	<2	11.50	34.5	45.1	23463	1.74	31	6.3	96.31	0.13	25.02	37.1	0.2	85
1025	546640	5475038	70.79	0.09	1.4	<2	6.25	16.8	53.1	9715	1.83	18	3.8	14.64	0.14	0.74	21.8	<0.2	71
1026	545450	5475776	61.64	0.11	2.5	<2	8.37	11.3	138.6	15386	1.94	21	3.7	17.47	0.12	0.89	21.8	<0.2	80
1027	542892	5473416	61.67	0.19	4.3	<2	7.20	10.3	49.4	10841	1.47	24	3.3	43.43	0.21	1.58	13.7	<0.2	65
1028	542232	5472692	61.31	0.11	3.4	<2	6.85	28.7	31.7	5779	0.82	26	5.3	27.75	0.13	0.98	9.5	<0.2	45
1029	539875	5472983	57.61	0.11	4.1	<2	9.97	48.6	35.8	12855	1.83	38	5.2	32.51	0.18	1.43	21.0	<0.2	72
1030	537474	5474036	15.30	0.08	8.6	<2	15.88	41.3	30.2	32277	3.21	30	4.0	24.38	0.09	1.59	41.0	<0.2	72
1031	536234	5474229	31.46	0.15	5.2	<2	12.58	39.3	56.2	28145	3.51	34	6.4	32.86	0.12	2.56	46.6	<0.2	92
1032	535998	5475257	36.28	0.12	3.0	<2	9.54	23.9	104.4	19239	0.72	28	5.9	22.02	0.12	0.94	32.8	<0.2	84
1033	535047	5475283	40.01	0.16	4.7	<2	12.51	27.9	146.5	20225	1.20	32	5.6	23.67	0.13	1.02	40.6	<0.2	104
1034	534587	5474766	33.60	0.14	5.5	<2	13.92	34.2	97.1	26650	1.30	37	9.0	22.45	0.19	1.08	44.6	<0.2	89
1035	532674	5474761	20.64	0.06	2.4	<2	9.24	26.7	38.1	22149	0.56	31	3.8	18.12	0.08	0.64	34.9	<0.2	57
1036	531738	5473743	56.01	0.16	4.7	<2	7.77	26.6	46.1	16943	2.84	20	4.4	53.35	0.16	3.97	25.0	<0.2	75
1037	531209	5474031	65.20	0.11	3.2	<2	5.57	14.5	39.4	5151	2.12	20	5.1	52.67	0.17	6.58	13.7	<0.2	61
1038	529119	5473992	61.18	0.08	7.4	<2	7.08	10.7	32.9	4937	0.73	22	6.4	18.22	0.16	0.60	13.2	<0.2	57
1039	528724	5473354	53.84	0.14	13.0	<2	10.73	16.1	53.4	11602	1.97	19	3.3	31.48	0.41	1.53	26.2	<0.2	91
1040	527114	5472446	50.18	0.17	52.3	<2	15.50	15.3	86.2	21172	2.41	24	5.6	29.82	0.55	0.87	29.1	<0.2	97
1041	526585	5472824	61.87	0.14	10.0	<2	9.71	11.6	59.3	11215	1.93	19	3.2	21.72	0.12	1.17	18.1	0.2	69
1042	523226	5472456	73.42	0.06	3.9	<2	3.56	8.5	24.9	3156	1.26	11	4.0	7.94	0.16	0.54	7.1	<0.2	51
1043	522699	5471184	10.12	0.14	INF	INF	15.85	50.4	32.1	37810	0.53	47	8.6	41.96	0.14	3.90	63.1	<0.2	91
1044	520190	5471130	11.07	0.15	6.3	<2	17.59	64.4	40.7	42327	0.80	50	9.9	46.18	0.15	4.07	74.2	<0.2	101
1045	520626	5473075	34.47	0.13	6.6	<2	10.51	32.5	38.1	25489	1.02	32	7.4	27.72	0.30	0.96	38.2	<0.2	82
1046	519616	5473633	11.78	0.11	4.2	<2	12.99	46.4	29.0	33836	0.44	39	7.4	34.24	0.14	1.48	56.7	<0.2	78
1047	519481	5474531	58.31	0.11	4.8	<2	7.64	22.8	32.9	15053	1.91	24	4.4	17.74	0.25	2.25	26.4	<0.2	80
1048	519946	5474601	55.13	0.12	INF	INF	7.44	24.3	35.3	45096	1.63	28	5.4	20.74	0.27	1.39	39.8	<0.2	80
1049	520740	5474525	19.49	0.12	8.1	<2	14.08	40.2	38.8	32522	0.70	36	7.1	30.69	0.22	0.74	48.4	<0.2	80
1050	522229	5475506	40.47	0.14	7.3	<2	11.60	33.3	41.3	20622	1.01	25	7.8	22.31	0.25	0.83	31.4	<0.2	79
1051	523337	5475766	62.21	0.08	3.2	<2	5.36	14.3	53.4	4978	1.41	15	4.4	22.33	0.18	0.86	17.7	<0.2	58
1052	523732	5474300	55.53	0.07	7.0	3	4.68	13.0	38.8	9616	2.53	17	3.2	14.29	0.11	0.67	12.6	<0.2	61
1053	524196	5473483	58.98	0.08	6.0	3	4.77	10.3	39.1	5448	2.04	14	3.2	11.80	0.10	0.68	9.3	<0.2	54
1054	524916	5474671	59.06	0.09	7.4	<2	4.39	14.3	86.6	14599	2.27	17	3.3	18.37	0.20	0.90	19.8	<0.2	68
1055	526027	5475308	50.21	0.08	4.6	<2	5.82	13.9	41.9	12349	1.09	17	6.3	14.30	0.23	0.67	24.0	<0.2	57
1056	526548	5474761	70.43	0.09	12.0	<2	5.98	14.1	62.9	6261	1.23	17	3.5	22.95	0.13	0.77	17.4	<0.2	66
1057	527317	5474474	63.92	0.08	5.5	<2	3.69	10.3	36.2	4138	1.40	15	3.5	13.55	0.11	0.70	9.7	<0.2	58
1058	528258	5474809	69.23	0.09	7.0	<2	3.51	8.5	41.0	5828	1.53	11	3.3	11.59	0.14	0.77	10.9	<0.2	60
1059	528440	5475902	66.02	0.08	2.8	<2	2.44	6.6	47.3	3940	1.65	11	3.2	10.01	0.12	0.87	7.2	<0.2	58
1060	531227	5476960	72.96	0.08	4.1	<2	6.59	9.5	76.4	4032	1.06	14	3.5	10.91	0.23	0.56	10.3	<0.2	60
1061	531559	5476852	65.31	0.10	6.8	<2	6.37	10.2	80.5	11150	1.28	15	3.8	16.76	0.17	0.70	20.8	<0.2	76
1062	531733	5476119	53.59	0.09	7.5	<2	7.66	16.9	67.1	6477	1.18	12	4.6	17.37	0.20	0.83	11.6	<0.2	47

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	---------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	---------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	---------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
1063	531802	5475259	73.25	0.06	3.3	<2	2.45	6.0	19.1	3663	2.32	9	3.0	6.35	0.10	1.20	8.2	<0.2	54
1064	533271	5475277	42.42	0.06	3.0	<2	1.58	3.8	41.1	3690	2.01	12	1.8	6.36	0.06	0.54	4.8	<0.2	33
1066	532649	5476730	57.84	0.08	12.0	<2	11.66	19.8	80.6	11704	1.55	26	3.1	17.44	0.17	0.84	19.4	<0.2	69
1067	534384	5477797	18.71	0.19	50.5	10	59.73	36.2	100.0	46589	0.99	72	7.3	17.38	1.49	0.55	65.8	<0.2	85
1069	535009	5476604	83.82	0.06	1.6	<2	3.72	5.8	37.4	6707	1.90	13	2.0	9.49	0.06	0.45	5.3	<0.2	54
1070	536095	5477328	37.76	0.07	3.0	<2	9.66	17.5	51.1	19139	0.76	23	4.1	12.84	0.11	0.59	25.5	<0.2	71
1071	536600	5475199	45.51	0.12	3.6	<2	9.80	21.5	138.3	16127	1.26	26	3.7	18.47	0.10	1.10	21.6	<0.2	70
1073	538844	5475343	62.71	0.10	2.1	<2	7.96	10.0	127.3	7386	2.44	25	2.1	13.35	0.15	0.79	10.1	<0.2	85
1074	539280	5475309	63.33	0.14	5.2	<2	8.19	11.8	124.4	25660	1.26	15	2.5	22.26	0.12	0.61	28.6	<0.2	112
1075	539791	5475576	72.64	0.09	INF	INF	1.91	10.8	12.9	5495	0.61	11	4.6	29.11	0.08	1.53	15.7	<0.2	38
1076	539713	5475198	66.68	0.11	3.2	<2	8.78	13.5	96.3	21532	1.72	17	2.7	14.27	0.10	0.56	23.8	<0.2	99
1077	545610	5475320	63.30	0.13	2.3	<2	9.63	11.5	109.2	16756	2.77	21	2.5	16.61	0.12	0.98	25.4	<0.2	83
1078	545946	5475312	66.19	0.11	1.4	<2	6.39	10.5	80.1	14208	2.68	15	1.5	11.13	0.08	0.71	17.9	<0.2	100
1080	552949	5475774	38.51	0.28	2.3	<2	12.71	32.6	62.3	23488	19.13	38	8.0	46.84	0.11	1.29	50.4	0.6	87
1081	547837	5479956	50.33	0.20	2.3	<2	6.91	29.8	33.0	16430	1.91	25	6.1	26.15	0.16	1.22	29.7	<0.2	80
1082	540722	5480008	73.82	0.06	1.7	<2	2.50	5.6	30.2	5062	1.22	7	2.2	7.67	0.07	0.53	8.8	<0.2	43
1083	540135	5479192	66.26	0.08	3.0	<2	4.43	6.7	35.8	10718	1.63	15	2.6	10.21	0.09	0.58	11.3	<0.2	67
1084	537361	5473391	38.84	0.11	3.7	<2	9.79	41.3	37.6	19610	1.43	34	4.9	25.33	0.15	1.26	29.4	<0.2	66
1085	537061	5472750	39.33	0.13	4.0	<2	10.37	51.2	35.1	20578	1.06	37	6.3	32.79	0.19	1.57	36.8	<0.2	74
1087	536030	5473233	72.30	0.10	3.8	<2	4.15	27.7	40.3	6952	1.90	29	2.9	22.13	0.13	1.24	12.1	<0.2	56
1088	535229	5473082	27.95	0.12	4.4	<2	9.53	34.0	37.3	25711	2.01	28	9.0	31.13	0.16	2.29	37.3	<0.2	80
1089	534669	5473789	26.32	0.11	7.1	<2	13.00	36.6	41.0	28129	3.72	33	4.5	25.17	0.11	2.17	40.4	<0.2	75
1090	530789	5471542	25.45	0.13	3.6	<2	12.16	37.6	39.0	27232	1.14	35	6.1	66.20	0.09	16.79	42.1	<0.2	87
1091	530384	5472253	19.70	0.08	2.0	<2	10.51	33.6	31.3	25878	0.99	32	5.4	57.83	0.09	12.85	38.9	<0.2	80
1092	529443	5472099	26.47	0.09	3.1	<2	11.45	31.0	37.9	22504	1.35	32	4.9	47.62	0.10	12.40	33.1	<0.2	71
1093	528120	5471747	30.56	0.13	4.2	<2	12.51	38.7	51.7	24040	1.77	38	6.5	72.61	0.14	21.90	38.2	<0.2	85
1094	527239	5471183	44.77	0.09	6.6	<2	7.62	24.8	52.0	21112	5.96	39	5.5	43.85	0.21	11.89	29.9	0.3	51
1097	527351	5469794	53.60	0.11	3.3	<2	9.17	19.0	36.5	10508	2.16	22	5.1	54.45	0.15	31.94	21.6	<0.2	64
1099	528515	5469483	25.87	0.11	4.1	<2	13.04	35.3	37.5	24015	1.05	38	5.4	89.20	0.09	24.41	31.3	<0.2	97
1100	560835	5472706	20.41	0.07	INF	INF	5.76	16.8	12.2	15601	1.04	15	5.0	45.96	0.07	2.46	28.5	<0.2	65
1101	560523	5472580	25.95	0.08	1.6	<2	6.14	17.8	12.9	13583	1.12	14	4.2	49.03	0.06	2.76	24.5	<0.2	59
1102	561068	5471580	37.39	0.16	2.1	<2	10.61	23.9	20.6	30544	1.80	18	7.5	74.14	0.10	4.57	52.2	<0.2	82
1103	561172	5470542	32.06	0.11	2.2	<2	6.44	20.5	16.8	18813	1.18	15	5.5	65.89	0.07	3.65	30.9	0.2	68
1107	561435	5466153	16.93	0.11	1.9	<2	10.52	31.5	24.4	33348	3.47	23	6.1	67.82	0.07	4.22	37.6	0.3	92
1109	562623	5464743	17.96	0.10	1.2	<2	15.18	22.8	20.6	41085	3.26	23	6.3	63.79	0.07	3.67	41.7	0.4	91
1110	563168	5463969	14.55	0.09	1.6	<2	11.36	24.5	17.8	32783	2.50	20	5.8	51.55	0.06	2.93	38.8	<0.2	75
1114	562697	5462982	11.82	0.07	1.8	<2	11.10	20.1	16.0	41368	4.40	19	5.5	69.80	0.05	6.13	34.7	<0.2	78
1115	561024	5463080	21.28	0.08	1.1	<2	7.35	34.7	18.9	20841	1.34	24	4.5	70.13	0.05	4.62	28.5	0.2	79
1118	563977	5461614	12.76	0.06	0.5	<2	3.96	17.0	13.9	14679	1.19	12	6.4	53.18	0.05	4.27	23.5	<0.2	44
1119	539294	5474546	11.63	0.08	2.4	<2	9.48	33.5	25.6	23556	0.63	28	4.0	23.58	0.06	0.92	34.6	<0.2	59
1121	542274	5475353	44.79	0.10	4.7	<2	8.24	31.6	74.3	20519	4.31	39	5.0	27.45	0.12	1.15	27.8	<0.2	63
1125	546071	5471433	45.56	0.11	INF	INF	8.91	32.5	50.9	19443	1.76	39	7.8	35.21	0.15	0.98	27.9	<0.2	79
1126	548886	5471319	11.05	0.11	3.5	<2	13.79	47.9	39.0	32342	0.93	38	9.3	43.92	0.08	1.63	54.9	<0.2	81
1127	542635	5481814	13.45	0.04	0.9	<2	4.76	12.3	21.8	11767	1.27	13	2.4	13.73	0.04	0.87	17.5	<0.2	31
1128	543035	5481532	11.78	0.07	1.1	<2	7.57	32.0	26.3	18239	0.55	28	6.3	28.56	0.06	0.66	29.8	<0.2	50
1138	547688	5473990	16.31	0.14	3.6	<2	12.88	48.2	52.9	33091	1.71	39	8.8	40.88	0.11	1.93	50.1	<0.2	83
1139	546538	5474457	17.86	0.06	1.4	<2	7.25	21.5	24.2	15301	0.97	19	3.0	18.31	0.05	1.03	24.9	<0.2	37
1140	550427	5470909	11.51	0.12	2.0	<2	14.06	47.7	45.5	32100	1.17	43	9.5	45.07	0.10	1.95	56.1	<0.2	86
1143	531581	5468612	26.01	0.16	INF	INF	14.12	42.1	64.6	33546	4.36	39	7.9	56.13	0.16	9.64	46.7	<0.2	96
1145	535630	5472146	29.80	0.16	2.9	<2	12.06	40.7	54.8	24881	7.22	35	5.0	26.82	0.13	1.88	35.2	<0.2	75
1147	535945	5470971	68.08	0.16	2.4	<2	3.49	15.1	43.7	6115	2.06	15	4.0	32.74	0.20	1.14	11.8	<0.2	57

Sample	Easting	Northing	LOI	Ag	As	Au	Co	Cr	Cu	Fe	Mo	Ni	Pb	REEs	Sb	U	V	W	Zn
	Method	--------->	Grav	MS	INAA	INAA	MS	MS	MS	OES	MS	OES	MS	MS	MS	MS	OES	MS	OES
	Units	--------->	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Det Limit	--------->	0.05	0.04	0.5	2	0.04	1.0	0.4	20	0.06	1	0.3	n/a	0.03	0.03	0.4	0.2	1
1148	536489	5471218	70.37	0.17	3.3	<2	4.91	19.2	96.9	6498	1.15	14	3.4	27.36	0.19	1.40	15.7	<0.2	60
1149	537004	5470691	38.90	N.M.	4.7	<2	N.M.	N.M.	N.M.	NM	N.M.	NM	N.M.	N.M.	N.M.	N.M.	NM	N.M.	NM
1150	536544	5470045	35.13	0.24	7.7	6	9.68	39.1	95.5	18324	9.74	30	11.8	33.06	0.34	1.30	35.2	<0.2	87
1151	537253	5469731	60.35	0.15	12.0	3	8.49	9.6	72.5	6508	4.80	34	4.1	13.30	0.16	0.54	7.7	<0.2	57
1152	538686	5469575	41.93	0.13	6.7	8	10.24	29.7	73.3	21895	2.00	23	5.9	29.57	0.21	0.90	34.9	<0.2	76
1153	539315	5469217	64.16	0.07	7.6	<2	4.65	13.1	98.5	5204	1.08	17	2.6	13.30	0.13	0.68	12.2	<0.2	56
1155	540100	5469715	68.70	0.13	6.7	<2	8.09	28.9	116.6	12574	3.57	23	3.0	16.51	0.23	1.17	19.3	0.2	76
1156	539419	5469677	53.82	0.14	4.9	<2	7.47	40.9	135.5	12343	1.61	27	5.3	21.16	0.24	1.09	21.9	<0.2	53
1157	538853	5471148	52.59	0.23	5.8	<2	8.25	30.9	83.8	11263	5.08	25	3.7	20.43	0.31	1.24	15.5	<0.2	59
1158	538511	5471484	46.07	0.12	5.7	<2	8.97	26.3	43.6	22370	1.42	24	6.2	30.07	0.28	0.96	29.4	<0.2	67
1159	538496	5472622	70.14	0.16	4.0	<2	5.10	23.0	42.7	7959	2.55	20	3.9	15.80	0.14	0.55	24.3	<0.2	95
1160	539884	5473468	58.01	0.20	4.0	<2	7.54	41.7	40.6	19438	1.60	30	6.7	39.91	0.25	1.48	31.0	<0.2	68
1161	539921	5472067	57.54	0.19	4.5	<2	8.66	25.9	47.3	15728	2.05	26	6.4	43.29	0.20	1.30	29.7	<0.2	65
1162	540478	5472251	63.86	0.13	3.3	<2	4.72	19.5	38.6	6727	1.46	22	7.0	30.00	0.18	1.36	14.3	<0.2	56
1163	540959	5472167	61.98	0.16	4.2	<2	9.82	18.5	46.3	10086	1.33	25	4.7	36.64	0.12	1.14	14.1	<0.2	78
1164	541048	5471934	53.35	0.20	4.3	<2	13.22	21.0	40.7	50036	1.80	23	4.8	47.80	0.14	0.88	24.6	<0.2	65
1165	541319	5471321	74.77	0.08	4.6	<2	3.82	18.2	61.9	6419	3.23	20	3.8	19.38	0.22	0.80	10.9	<0.2	40
1166	540302	5471456	39.36	0.12	5.5	<2	8.23	34.7	51.6	16961	2.33	26	8.4	26.43	0.25	1.06	30.4	<0.2	67
1167	539732	5471170	41.39	0.12	5.6	4	9.79	44.4	71.6	20866	2.72	35	3.7	21.99	0.17	1.36	24.9	<0.2	69
1168	539779	5470701	52.66	0.11	27.0	<2	5.18	17.6	73.7	19234	1.82	17	4.0	18.77	0.37	0.67	19.8	<0.2	54
1169	540761	5470884	29.13	0.09	INF	INF	8.04	32.5	44.5	18588	1.67	29	4.6	23.57	0.13	0.99	25.2	<0.2	65
1170	542422	5471029	67.45	0.09	2.9	<2	3.27	13.0	43.3	6711	0.93	14	5.1	18.26	0.10	0.89	7.9	<0.2	32
1171	542557	5472177	56.92	0.24	3.8	<2	6.90	23.8	53.4	9888	1.96	25	6.2	39.30	0.18	1.30	22.5	<0.2	76
1172	543336	5472462	60.22	0.17	3.2	5	4.28	21.9	43.8	4306	1.92	41	3.0	38.06	0.16	1.48	9.4	<0.2	41
1173	543906	5472789	61.02	0.24	4.9	<2	8.28	23.7	54.5	16634	2.41	37	3.7	37.10	0.23	1.23	24.0	0.2	109

Median	45.56	0.12	2.7	5	7.94	21.9	42.9	14941	1.61	23	5.0	43.24	0.11	1.56	28.1	0.3	71
Mean	45.48	0.14	3.6	8	9.10	24.7	47.4	17849	2.32	25	5.4	48.53	0.13	2.51	30.1	0.3	73
Standard Deviation	15.94	0.08	3.8	11	5.73	12.2	27.4	13919	3.20	11	2.5	33.39	0.09	3.20	16.5	0.1	22
Minimum	9.96	<0.04	<0.5	<2	1.28	3.8	6.6	2297	0.26	5	1.5	6.21	0.03	0.34	4.8	<0.2	18
Maximum	85.05	0.97	52.3	64	59.73	83.7	403.6	135000	49.85	128	30.4	319.64	1.49	31.94	180.0	1.1	166
Count	939	877	850	875	938	938	877	938	938	938	938	938	937	938	877	110	938

Notes

Grav = Automated gravimetric method
MS = Inductively coupled plasma mass spectrometry
OES = Inductively coupled plasma optical emission spectrometry
INAA = Instrumental neutron activation analysis
This document is part of Ontario Geological Survey - MRD 206 and Open File Report 6194.

INF = Insufficient sample for analysis
NS = No sample
NM = Not measured

Easting and northing co-ordinates are provided in NAD 83, UTM zone 15.

Metric Conversion Table

Conversion from SI to Imperial			Conversion from Imperial to SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
		LENGTH			
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
		AREA			
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
		VOLUME			
1 cm^3	0.061 023	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.307 951	cubic yards	1 cubic yard	0.764 554 86	m^3
		CAPACITY			
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
		MASS			
1 g	0.035 273 962	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 747	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 622 6	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311 3	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 90**	t
		CONCENTRATION			
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

	Multiplied by	
1 ounce (troy) per ton (short)	31.103 477	grams per ton (short)
1 gram per ton (short)	0.032 151	ounces (troy) per ton (short)
1 ounce (troy) per ton (short)	20.0	pennyweights per ton (short)
1 pennyweight per ton (short)	0.05	ounces (troy) per ton (short)

Note: Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries, published by the Mining Association of Canada in co-operation with the Coal Association of Canada.

93° 00'

49° 30'

Upper Manitou Lake

HARPER LAKE

BOYER LAKE

Long Lake

Stormy Lake

KAWASHEGAMUK LAKE

Wapageisi Lake

Bending Lake

REVELL LAKE

HODGSON

ILSLEY

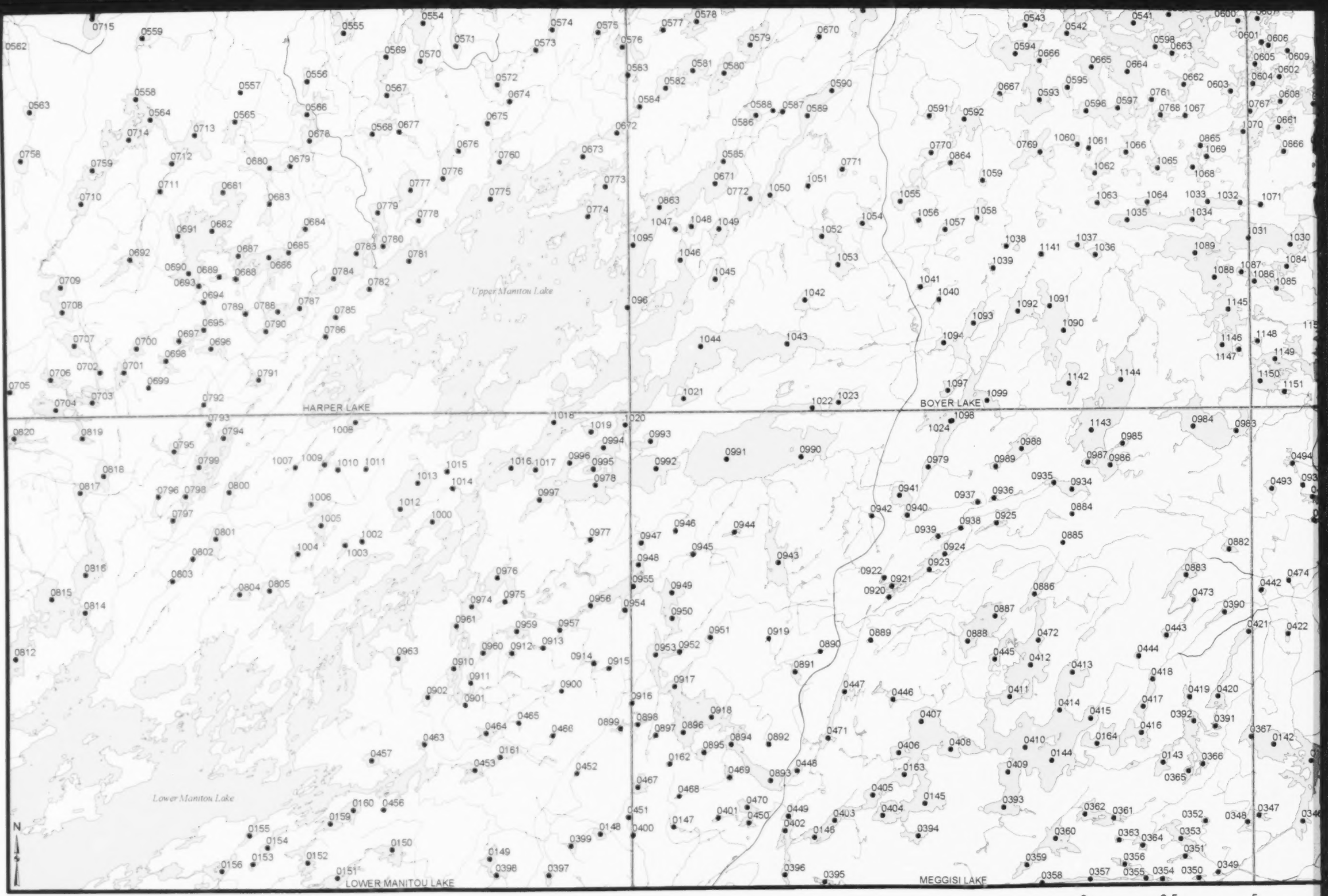
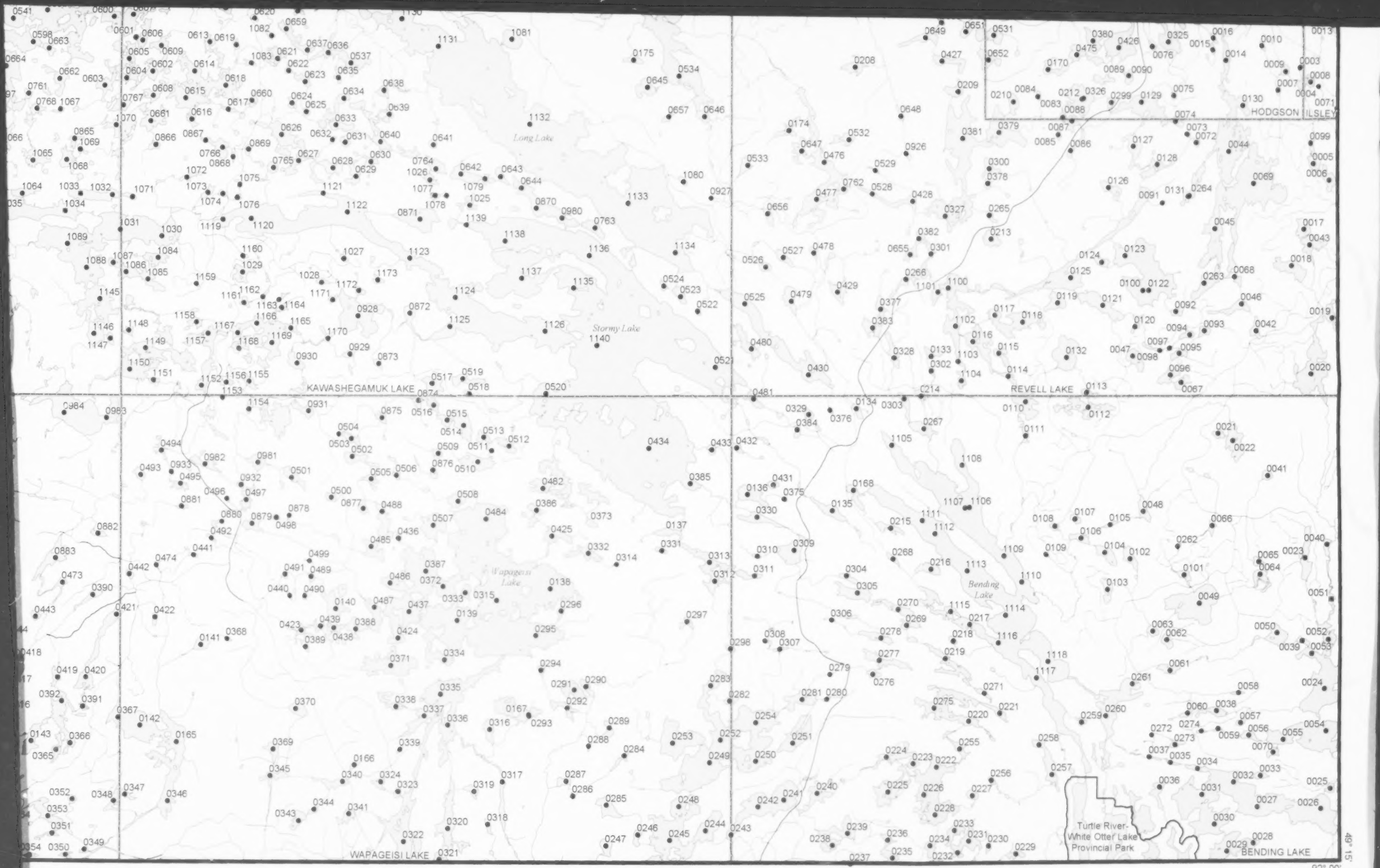


Figure 6. Sample site location map of the Upper Manitou Lake survey area.



2.5 5 10

Kilometres

1:100 000 scale

Accompanies OFR 6194

ISSN 0826-9580
ISBN 1-4849-2666-1